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ABSTRACT

This practicum report describes a study skills program designed to teach organizational skills and notetaking techniques to students in grades eight and nine. The program included in-service teacher workshops designed to promote learning style awareness strategies, foster an interdisciplinary curriculum perspective, and encourage the teaching of conceptual organizational structures. Parents were made aware of the goals of the program. An evaluation of the program indicated that the teaching of learning strategies did help students build study skills. Teachers showed an improved awareness of the importance of study skills, and parents noted that the study skills were practical and important tools for improving their children's learning. (PCB)

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Improving Student Learning in Content Areas Through an Interdepartmental Study Skills Program Promoting Structural Notemaking Strategies

by

Gordon Turner

Cluster XXVIII

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A Practicum II Report Presented to the Ed.D. Program in Early and Middle Childhood in Partial Fulfillment of the Requirements for the Degree of Doctor of Education.

Submitted to Dr. Polly Peterson

NOVA UNIVERSITY

May, 1990

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PRACTICUM APPROVAL SHEET

This practicum took place as described.

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May 14, 1990

This practicum report was submitted by Gordon Turner under the direction of the adviser listed below. It was submitted to the Ed.D. Program in Early and Middle Childhood and approved in partial fulfillment of the requirements for the degree of Doctor of Education at Nova University.

Approved:

July 16, 1990
Date of Final Approval of Report

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ABSTRACT

Improving Student Learning in Content Areas Through an Interdepartmental Study Skills Program Promoting Structural Notemaking Strategies. Turner, Gordon A., 1990: Practicum Report, Nova University, Ed. D Program in Early and Middle Childhood. Descriptors: Learning Strategies/Secondary/Study Skill Integration/Thinking Processes/Learning To Learn Concepts/Common Curriculum/Interdepartmental Teaching/Metacognition/Notetaking Techniques/Cognitive Mapping/Graphic Organizers/Reading Aids/Schematic Structures

This practicum was designed to provide a repertoire of thinking strategies to assist early adolescents in developing lifelong learning concepts. The primary goal was to implement a study skills program to promote a variety of basic organizational skills and contemporary notetaking techniques. Another important goal was to foster a collaborative perspective among subject disciplines when teaching study skill techniques. Central to this team focus on advocating basic processing principles across the curricula was the systematic teaching of an array of semantic and structured notemaking strategies to assist students in organizing, personalizing, streamlining and/or synthesizing information from textual reading.

The writer provided a series of teacher in-services which promoted learning style awareness strategies, fostered an interdisciplinary curriculum perspective, and encouraged the teaching of conceptual organizational structures. The professional development component was reinforced by the demonstration of varied effective organizational skills and notemaking strategies in the school's Gr 8/9 social studies and counselling classes. Collaboration with parents and other teacher committees assisted the integration of these innovative concepts.

Analyses of the data revealed that the teaching of learning strategies assisted students to develop procedures appropriate to building study skills. The notemaking component of the program provided students with conceptual structures for organizing information and enhanced the interrelatedness between and among subject areas. Parents indicated that these common information processing skills universally applicable across the curriculum were practical and important tools for improving their child's learning. Although staff showed an improved awareness of the importance of study skills, some teachers did not model or demonstrate effective techniques to organize information on a consistent basis at the classroom level.

CHAPTER I

INTRODUCTION

Description of Work Setting

The writer's work setting is in a large, comprehensive secondary school which serves an established, upper middle class community in a large city of approximately five hundred thousand people. The school is situated in a very old and prestigious community where the average home is valued at an average of four hundred thousand dollars. The building was constructed in the 1920's and enlarged in the 1960's with an addition to the science, gym and industrial arts areas. The original school was built as a middle school and is one of the city's oldest esteemed public schools.

Until recently, the school population was composed mostly of Caucasian children. Responses from a four year old school survey indicated that just over half of the families consist of two parents and children. In the last few years there has been an increase in the community of wealthy Hong Kong immigrant families to the extent that over twenty per cent of the students now indicate that English is not used on a regular basis.

In order to meet the needs of all the students in the community the school has begun to enroll a large number of students with physical handicaps and learning difficulties. Several district-placed special education classes are being integrated into the regular classroom. Also in order to keep an enrolment of nine hundred students, the school accepts cross boundary adolescents from other communities which because of some physical or emotional learning problem have a long history of documented academic difficulties. These recent changes in school population have had several effects.

Because many of the staff have over twenty years of teaching experience at this school, they have had difficulty adjusting to the various abilities, skill levels, and cultural differences in their classes. Although the school espouses a philosophy of fostering academic and student self-esteem, there still is a long history by the staff of disinterest in modifying subjects or teaching techniques. Many staff still focus in their classes primarily upon the text as well as base their lessons upon the traditional teacher centered lecture style.

The core academic programs offered follow old provincial guidelines which basically assess the students' ability by performance on tests. At staff development meetings teachers and principal discuss professional development in a cohesive, informed manner. However, many projects have not been energetically implemented by staff members. In the spring of last year, the principal decided to organize a needed study skills program throughout all grade 8/9 classes to assist students in upgrading basic organizational skills and develop learning strategies to cope with materials used in classes.

Writer's Work Setting and Role

The Skills Development teacher is a generalist in special education, with expertise in teaching methodology for students with mild learning problems. The major role at the secondary level in the remediation of basic academic skills is not only to provide tutorial upgrading through modified resource materials, but also to emphasize the development of positive learning strategies. The role of the Skills Development teacher is to create an individual educational program based on diagnostic information. The Skills Development teacher provides long-term remediation in a particular grade eight or nine subject as well as providing counseling to slow or under-achievers who need assistance in focusing on acquiring insights into developing an improved pattern of learning.

Many of the students referred to the program have experienced frustration and often have a long documented history of academic difficulties at the elementary or secondary level. In a resource room-type setting, the program attempts to focus upon fostering

improved attendance and student self-esteem through academic success in modified subjects. Many students display sporadic attendance patterns, disruptive behavior in class, or a general disinterest in completing work. In order to ensure these students complete homework, upgrade basic organizational skills, or remediate any deficiencies in core subjects, these "at risk" students are referred to the Skills Development teacher.

The writer has been a Skills Development teacher for the past twelve years, developing expertise in organizing individual educational programs based on diagnostic information. The writer is a generalist in the field-based area of special education, with knowledge gained from many years of teaching modified core subjects to secondary students with learning difficulties. In an eighteen year teaching career in six schools in both the elementary and secondary areas, the writer has acquired an extensive inventory of special educational resource materials as well as experience in organized referral systems, school-based team meetings, and effective parent-teacher liaison. The writer has been committed to a variety of professional development activities in acquiring new insights into trends in special education. As a school department head for four years, the writer has provided leadership on several school committees relating to special education programs at the school and district levels.

The writer holds a bachelor's degree in Education, a master's degree in Educational Administration, and is currently enrolled in a doctoral program in Early and Middle Education.

CHAPTER II-

STUDY OF THE PROBLEM

Problem Description

Many of the students enrolled in grade eight and nine had not been provided instruction in various study skill concepts. At the elementary level the curriculum and instructional techniques employed continuous progress philosophies as well as current developmental practices. In recent years, the writer's secondary school had begun to feel the effects of a need for a study skills program to assist the three hundred grade eight and nine students in bridging the gap between elementary and secondary teacher expectations. Although several articulation meetings had been held each year to assist in the development of a K to 12 philosophy and ensure a smooth transition for students, a number of the enrolment could not cope with this new experience.

At the same time, the writer had seen an increase in English As A Second Language students as well as a considerable enrolment of children with learning disabilities mainstreamed into the regular classroom. Counsellors, teachers, parents, and administrators were concerned about the academic standards and student progress. Because of a recent Royal Commission on education in the province, secondary teachers were being expected to develop appropriate teaching practices to meet the 'unique' learning styles of each young adolescent.

The newly appointed principal was committed to a variety of professional development activities to improve effective learning strategies in assisting students to organize and retain information. He believed that effective instructional techniques could

be enhanced by employing a cooperative team approach among the core subject teachers. The writer was assigned to head the development and implementation of this interdepartmental study skills project.

Twice the writer attended and made presentations to both the professional development committees as well as department heads' cluster meetings. Four staff members expressed interest in becoming involved in the organization and implementation. Lastly, the writer attended two subject department meetings and began fostering an interest in the study skills project. The principal was eager to implement this program.

With the successful implementation of the project and improvement in the problem, the writer expected several outcomes. Firstly, students would recognize the importance of being organized and examine their habits/attitudes towards improving various study skills. Secondly, the students would, through examining their strong and weak study habits, gain insight into the common problems young adolescents have at secondary school. Thirdly, the grade 8/9 students would develop fundamental organization study strategies to equip them for coping with the academic demands in core subject areas. Next, these students would develop an improved understanding of how to process, retain, and learn information. Furthermore, the staff would have an improved understanding of how to integrate study strategies into their content areas. Lastly, the parents would have a better knowledge about how to assist their child in developing study skills at home.

Briefly stated, the problem was: Some grade 8/9 students did not have an understanding of basic learning strategies essential in coping with the expectations in secondary school. Teachers needed to respond and provide appropriate teaching techniques to upgrade these students' learning skill concepts.

Problem Documentation

The writer provided two sources of hard data to support the existence of the problem. The school conducted an assessment of teachers' and students' attitudes towards

learned or taught study strategies. The questionnaires were designed by the writer to survey various components generic to universal study programs. However, part of the format models were based on work by Kalina (1975) (refer to Appendix A and B for sample and results).

The teacher questionnaire consisted of twenty-four Yes/No questions divided into three sections identifying student needs, program components, and notetaking concepts. The teachers also indicated in thirteen questions to what extent they implemented various study skill strategies in their classrooms. Participation in the survey was voluntary involving twenty-five counselling, socials, science, English staff as well as selected staff members working in library, special education and E.S.L. programs (refer to Appendix A).

The student questionnaire also followed the Kalina format of Often/Sometimes/Rarely and was divided into five sections assessing their study habits. Participation in the survey was also done on a voluntary basis with thirty grade 8/9 students enrolled in the Skills Development Program.

Summary of Results From Teacher Questionnaire

* A significant proportion of the teachers indicated a need for a study skills program which provided for the teaching of crucial learning procedures.

* Among the 25 teachers surveyed 18 (70%) expressed concern about notetaking, textbook retention, and test taking skills.

* Although 7 of the 25 teachers assessed did not state a need for various study skill concepts to be upgraded, it could have been the result of a lack of knowledge about the values of study skills. The writer administered the questionnaire to departments in

which he had not yet outlined the proposed project or provided needed background information on rationale.

* The results indicated that 18 (70%) of the teachers were in favor of developing school study guides for parents and students to assist them in organizing/completing homework.

* The questionnaire validated the need for a multidimensional solution for this problem and also confirmed a team approach be implemented by departments.

* The findings of this limited questionnaire concurred with a recent Provincial Royal Commission on education, that professional development was needed by teachers in gaining knowledge about various thinking processes.

* Responses stated in section D reflected a need for some staff consistency in developing study skill structures.

Summary of Results From Student Questionnaire

* Evidence reflected throughout the student study habits assessed in section A of the survey, suggested a sporadic pattern of study routines and lack of knowledge about time/organizational management effective at the grade 8/9 level.

* Few students were not positive towards achievement at school reflected by their candid responses in section B of the survey.

* Significantly, half of the 30 students in almost every question expressed a lack of understanding about crucial notetaking skills fundamental to study skill concepts.

* In section B, the students' answers suggested a lack of consistent instructional practices in teaching various notetaking concepts at the grade 8/9 level.

* Overall, almost half of the responses indicated grade 8/9 teachers should evaluate notebooks on a regular basis. Findings could conclude that student achievement is perceived through examinations, not daily assignments.

* In this questionnaire, findings concurred that there is great pressure on students to perform on examinations and indicated a rationale for teaching test taking strategies by some departments who emphasized this method of evaluation.

* In section D, the survey confirmed the need for a variety of generic components associated with study concepts.

Causative Analysis

The writer provided the following causes contributing to the stated problem. Perhaps one of the central issues underlying the school's nebulous understanding of various study strategies and value for a co-ordinated study skills curriculum was the lack of communication among departments concerning consistent procedures to be implemented. At that time, there simply had not been a team attempt to develop clear practices to develop a study skills program for grade 8/9 students. Also, staff indicated varying levels of commitment to, enthusiasm for, and knowledge about developing critical thinking structures needed by students in organizing data at the grade 8/9 level.

Secondly, though some students indicated knowledge about study skills and various concepts helpful to learning, the majority of grade 8/9 students had not been given 'direct instruction' nor the opportunity to practice a cluster of basic organizational skills necessary in developing study strategies.

Finally, the third cause identified by the writer was that procedures for informing all students and parents in the school about the rationale for and current information about techniques to increase study skills at home had not been undertaken by staff.

Relationship of Problem to Literature

The purpose of this section is to discuss the relationship of the stated problem to literature gleaned from research studies and related articles in professional journals, primarily over the last ten years. First, the literature cited briefly outlined background theory, practice, and research which provide a broad perspective for the theoretical rationale for teaching an array of study skill concepts at the middle school years which are designed to ease the transition from elementary to secondary school.

Secondly, the notable and extensive literature on the effects of various structured notemaking strategies on metacognition in terms of organizing, processing, personalizing, and retaining information.is presented The writer discusses the theoretical rationale and practical value of teaching notemaking concepts as many of the current learning theories, notemaking is grounded in a variety of learning styles and conceptual theory research. Lastly the literature discussing current study skill practices which emphasize the value of enhancing a cooperative interdepartmental team process across the curriculum when implementing study skill learning to students is summarized.

The development of study skills concepts and other thinking skills has become an important topic for upper elementary and middle grade educators. Over the years despite improved methods and materials for teaching, many pupils are still unclear about learning (Irving, 1982). One of the crucial growing body of knowledge lies not in educators

focussing on new teaching techniques or resources but in understanding how pupils learn (Brewer, 1985). Until recently to teach the art of learning through awareness of sophisticated learning theory was rarely done in schools (Della-Dora, 1979). In practice, one of the most important skill concepts deemed essential to the development of an independent learner, study skills, was not taught in schools (Main, 1980).

In fact the concern for schools to provide practical applications for assisting students in learning to organize ideas and thus to study more efficiently goes back centuries. In 1896 Comenius wrote that the object of school was "to seek and find a method by which the teacher would teach less and the learner learn more (Brewer, 1985). Hamberlin (1981) argues that the neglect of the processes through which pupils learned was a predominant feature of earlier attempts at curriculum development. He suggests that we shift the emphasis away from passive to active modes of acquiring knowledge and recognize the learners' innate qualities of structuring information. Finally, Selmes (1987) states that it is apparent to everyone that educators have been far too concerned with what is taught and learned, and rarely concerned enough about how pupils learn.

Despite this apparently encouraging level of study skill awareness of the early eighties, a good deal of research evidence indicates that the 'learning how to learn' concepts are still misunderstood, often rejected, or recognized by many as being another short lived academic, cyclical megatrend not affecting traditional assumptions about knowledge. Malcolm Knowles summarizes the problem well when he writes that "it is a tragic fact that most educators know how to be taught but haven't learned how to learn" (Apps, 1978, p. 4).

Underlying the rationale for the concept of study skills is the assumption that learning has much to do with being organized. Learning how to learn can be defined as taking charge of organizing and processing ideas (Apps, 1978). Devine (1981) states that knowing how to learn must become the cornerstone goal for all classrooms. Salinger (1986) neatly captures the essential value of the emerging philosophy by stating that:

> The purpose of teaching study skills is to enable students to learn independently. While every expert in the field of education has a favorite list of essential study skills, thorough instruction in *any* list of skills allows individuals to experience a wide array of activities that are helpful in various learning situations. Based on this experience, students can then choose the methods best suited to their own learning styles. p. 334

Research indicates that young adolescents need systematic planned instruction in a series of functional skills to be able to learn (Castanga and Codd, 1984). Efficient and effective studying is a learned process, including developed habits of positive attitude, organization and self-discipline (Smith and Tompkins, 1988). Also Christen and Murphy (1984) assert that recent national studies steadfastly unite and support the issue of study skills being a critical component in the learning process.

Learning how to learn lies at the very foundation of preparing and developing information processing skills needed by students to cope with the impact of the ever changing information society of today. According to Marshak (1984), learning how to learn is not just another educational slogan because technology demands our young people to acquire, analyse, select, and process information quickly. He states this constant transmission of information requires new skills for teaching/learning and contends that the development of basic organizational cognitive processes will be fundamental to the computer age.

These cognitive concepts which many educators perceive as being vital to an individual's aspirations for learning have generally be associated with the term 'study skills' (Christen and Murphy, 1984). Literature perused by the writer provided varied lists of nebulous definitions, skill components, and suggests no single agreed upon theoretical understanding for study skills. To Swiderski and Zettel (1982), the term implies:

> skills designed to aid the student in learning how to study. Learning will be easier when study skills are mastered. Every building project requires a set of blueprints. And that is surely what study skills are — a set of blueprints for learning. (p. 256)

Some authors have attempted to define skills by listing the skills involved. Devine (1981) asserts that study skills are those competencies associated with acquiring, recording, organizing, synthesizing, remembering, and using information. To add to the ambiguity, Barron, McCoy, Cuevas, and Rachal (1983) identified several concepts associated with the process of study skill. They state:

> Study skills has been defined as those determined purposes, practices, and habits that a person uses to learn. It seems logical to conclude that study skills could be best defined as those learner-selected objectives, strategies, and habits that facilitate independent learning. They are tools needed for acquiring knowledge and are an integral part of the total reading process. (p. 329)

Also, Webster defines study as " . . . a process of acquiring by one's own efforts knowledge of a subject." Study skills author David Marshak (1984) feels that the terms study skills and learning skills can be used interchangeably. He states that although these terms originated in two different historical periods, their meanings are essentially identical. Study skills provide learning tools for solving problems and are universal in their relevance to the learning process.

Irving (1982) substantiates that study skills and learning strategies can be nebulous concepts by defining study skills as "learning associated with the acquisition and use of information in the pursuit of knowledge. Study skills are primarily cognitive concepts the student will need to master for handling or using information which the school curriculum requires" (p. 3).

Finally, Irving's (1982) definition of study skills identifies this broad concept as being sub-skills associated with acquiring knowledge which can be described as:

> formulating and analysing the range and nature of information to be gathered;
>
> identifying and appraising the most likely sources;
>
> tracing and finding them;
>
> examining, selecting and rejecting what is found;
>
> using or interrogating resources;
>
> making notes or otherwise recording any information found;
>
> interpreting, analysing, synthesizing and evaluating it;
>
> presenting and communicating it in an organized way;
>
> evaluating personal performance to improve future efficiency. (p. 5)

The approaches to study skills generally are instructional units in the areas of providing students with insight into effective reading, time management, test preparation, motivation, study habits, notetaking, memorization, and general reading strategies. There are an array of techniques emphasizing these study components just as there are, as pointed out earlier, a myriad of definitions for learning skills. It is agreed, however, that learning how to learn is critical in creating an independent learner and involves skill in the ability to handle or manipulate information. Checklists of study skills have been produced may times in an attempt to define the nature of study skills. Notemaking concepts have been accorded a high priority in the analysis of study skill components and will be the main focus of this project.

The starting point for understanding study skills in the writer's perception does not lie in listing and discussing the benefits of teaching the relevant sub-skills associated with learning how to learn, but rather in understanding the current knowledge of the psychological processes of learning through research done during the seventies and eighties. This research has changed the direction of traditional study skill movements,

specifically in identifying the importance of notetaking as a skill in learning. Research into learning styles during the past three decades has assisted in the development of a variety of new study skill techniques being implemented in 'learning how to learn' programs in schools today.

Obviously, the writer does not envision study concepts as being the miracle cure for all the ills in education nor the key to the acquisition of knowledge. However, at the heart of the new learning skill movement lies a subtle, fundamental study awareness vital to academic growth. In short, the development of a general understanding of learning how to learn initiates a discovery of a student's own unique learning style. In brief, the idea appears simplistic, but by adolescents focusing on a variety of learning processes, students increase their awareness of how they learn. Research suggests that this insight strengthens the teaching and learning process (Heilman, 1977). The child who is handicapped by the lack of understanding of their learning style can never reach full potential (Otto, 1974).

Bloom (1976) also makes a crucial statement by arguing that "schools must concentrate on individual differences in learning and on the learner's innate qualities, rather than his possession of relevant skills and obscure facts" (p. 10).

The need for the training by students or teachers in the organization and use of information has been expressed for many years. Although there is a tremendous growing body of information going back to the work of Gagne and other psychologists, it was not until the sixties that an increased interest among educational researchers in individual styles of learning provided clues to understanding appropriate learning skills.

While study skills and learning style have not become synonymous, both concepts have underlined the importance of pupils being offered alternative ways of learning which harmonizes better with their own style. Much of the new knowledge about learning processes and study skills has been generated from investigations into the understanding of learning style. The rationale for study skills is intertwined with a global interest in

cognitive style and the concern for individual differences which has provided background impetus for middle school curriculum reform.

The route or goal according to Joyce (1988) for the nineties is for educators to focus on helping students to gain a basic repertoire of learning concepts and become more effective information processors. He states that "information processing capitalizes on individual difference, generates the energy for learning, and characterizes cognitive theories which refer to the ways people organize data, solve problems, visualize concepts, and employ patterns to solutions" (p. 416).

To Delmo Della-Dora (1979), the essential part of learning how to learn is self-knowledge of one's learning style. In Delmo Della-Dora's book, Herb Thelen (1954), the father of learning styles, suggests the most significant way to foster interest in learning is in "investigating how we organize and structure information" (p. 22).

Hilda Taba, as early as 1932, criticized schools because they did not teach the psychological processes of learning nor the knowledge and appreciation of individual learning styles (Taba in Apps, 1978). Swiderski and Zettel (1982) have studied the underlying assumptions about learning in order to comprehend the global dimensions of learning style and discussed the importance of the learning processes of conceptualizing, scanning, and symbolizing information. This awareness of diverse thinking strategies operating in the individual's learning style has strengthened and in fact given the study skill concept a face lift.

One of the most important concepts affecting the study skills programs today has been the learning style theory of cognitive mapping formulated by Hanf in 1971. Hanf believes that learning to study involves learning how to construct, recall, and use information. Organizational strategies are innate in learners and Hanf provides a theoretical perspective which stressed that people think with concepts and that graphic concept maps serve to improve retention. Also the recent metaknowledge research dealing with the very nature of knowledge has contributed to providing innovative techniques for meaningful

learning. In 1977, Gowin invented various "vee" diagramming structures which proved very powerful strategies for presenting and constructing information (Novak & Gowin, 1984). This knowledge vee assisted the recognition of the system of learning based on innate cognitive memory pictures functioning in a variety of learning styles. These common schematic devices are helpful in making learning visual and meaningful.

This new focus on structure in learning how to process information and thus construct meaning from information was also recognized by David Ausubel (1960, 1963, 1968). The primary concept contributing to a better understanding of studying was that Ausubel proposed that learning would be facilitated if the learner were supplied with an appropriate frame of conceptual reference so that new information could be related to information the learner already possessed. Ausubel developed 'advance organizers' or structures which assisted the reader in organizing information into conceptual charts (e.g. problem-solutions, cause-effect and main idea-subordinate detail).

The development of using these mental images and other dimensions of concept visualization has also been discussed by Joyce (1988). He describes several cognitive developmental models for increasing an individual's conceptual growth and thus increasing the complexity for information processing. The theory describes human development in terms of increasingly complex systems or mental image structures for processing information. Conceptual development and the synthesis of a number of mental image strategies are essential in promoting recall and the transfer of learning (Arnone, 1988).

Central to this focus on learner cognitive/conceptual characteristics which affect information processing capacities is the fact that study skill strategies provide instruction in how to structure and organize information. Much of the recent research on study skill or learning processes provides practical strategies to assist students to organize and process ideas. The various approaches by the above researchers use powerful 'learning to learn' methods to assist students in conceptualizing information. Brewer (1985) believes that many of the new study skill dimensions discussed by these conceptual theorists were

focused upon by other researchers interested in the basic principles of streamlining information. He states that Jerome Bruner advocated construction of conceptual systems and wrote that learning is more effective when there is some structure around which material or ideas can be organized, especially the degree to which a learner is capable of understanding common frameworks and structuring learning (Henson, 1987).

Finally, the renewed interest in study skills in recent years has been a result of the progress and development of cognitive theory. Many of the practicum's proposed solutions are cemented in logical research focusing on the common cognitive structures used by humans in information processing. Many of the current 'learning how to learn' concepts and teaching techniques are grounded in learning style research which stresses the importance of pupils being taught a variety of structures or ways of organizing learning which harmonizes with their own style.

In conclusion, although each achiever possesses unique learning style characteristics which must be appreciated, the human also has similar conceptual images or patterns to structure and organize new information. Hunt and his associates contend that the 'learning to learn' instruction must depart from traditional pedagogical practices and illuminate the innate information processing capacities hidden in the left and right brain (Joyce, 1988). The value of implementing a variety of semantic organizers and organizational strategies into this decade's study skills movement in the writer's view cannot be understated.

A highly acclaimed report by the U.S. Department of Education (1983) echoes this enthusiasm:

> In most schools, the teaching of study skills is haphazard and unplanned. Consequently, many students complete high school and college without disciplined and systematic study habits. Successful study skills are necessary for acquiring the five other competencies as well as for achieving

> the desired outcomes in the basic Academic Subjects. Students are unlikely to be efficient in any part of their work without these study skills. (p. 19)

Lastly, Henson (1987) states that although the emergence of teaching how to learn has taken 2,000 years, there is reason for optimism because of the explosion of powerful cognitive theories recently discovered in learning style studies. The writer hopes we as educators have begun to shorten the time lag between theory and practice in education. The goal of this proposal is to thread this knowledge of the psychological and cognitive process of learning into a study skills program.

At this point the discussion is narrowed to one aspect of study skills. The review will now focus on notemaking because its implementation is the major goal of this practicum. Notemaking research will be summarized, its importance examined, and the efficacy of various methods will be discussed. The development from early simple lecture notetaking to the more sophisticated and visual methods used today will be traced.

For decades it has been debated whether education is an art or a science and the general premise today is that education is both. Educational psychologists have begun to recognize the effects of notetaking as a study technique. What researchers have not been able to agree upon is how to use these cognitive picture techniques to their best advantage.

Over the years notetaking concepts have developed from tightly structured reading procedures to largely visual structures to provide an overview of concepts. In the early development of notetaking styles, the traditional techniques of underlining, outlining, and summarizing or précis-writing were taught. Such notetaking styles as the Cornell column system, preview reviews, and the SQ4R system were popular.

Today the notetaking system of learning uses strategies like schematic mapping, advanced or graphic organizers, as well as complex text overview processing models to streamline ideas. Computers are playing a key role in the metamorphosis.

A review of the notetaking literature suggests that most studies dealing with notetaking focussed on the effects of whether the notetaking process in general facilitates

learning. A detailed review of the literature (McAndrew, 1983) reported unequivocally that notes assisted students to focus on and retain information. Students who paraphrased information in their own personalized notetaking style processed material at a deeper and more semantic level. Taylor (1982) found that notetaking styles like skeleton outlines or main idea/subordinate detail summarizing did increase the overall quality of reading understanding as well as expository compositions in students. These positive values were also supported by Bretzing, Kulhavy, Caterino, (1987) who believed that outlining and summarizing forced students to focus on main points of reading or listening and aided in recall. However, a central issue in much of the research on notetaking is whether its value lies in the act or in having familiar structures to store information for later study.

Early research from 1925 until about 1970 was primarily correlational in nature, whereas modern notetaking research is more experimental and theoretical in character (Richards, 1979). For example, Hidi and Klaiman (1983) report:

> Carrier and Titus (1981); Kulhavy, Dyer, and Silver (1975); Richards and Friedman (1978); and Weener (1971) examined how notetaking behavior varies as a result of test mode expectations; others (Eisner and Rohde, 1950; McClendon, 1958) have looked at how the anticipated time interval between notetaking and task-performance influences the quality and quantity of notes produced. (p. 46)

Much of the early research was based almost exclusively on studies investigating notetaking done during college lectures. During this activity learners engaged in active, complex processes such as coding, interpreting, and transforming which facilitated learning (Richards, 1980).

The functions of notetaking have been discussed in various journals. According to Fisher and Harris (1973):

> Notes have been described as serving as an "external memory device" for storing data for later retrieval and study. Note taking has also been

> described as a kind of "encoding" process, in which the learner reorganizes the input data, and by putting it in his own words, in a sense, transforms the data and "makes it his own" (p. 321)

In an attempt to understand the functions of notetaking skills such as paraphrasing and organizing material, the schema theorist Ausubel (1963, 1968) examined the processes of notetaking in facilitating knowledge. In an attempt to demonstrate these complex abstract schematic concepts for storing information Ausubel (1963, 1968) developed the advanced organizer which provides subjects with a frame of reference for processing new material. Ausubel's 'Subsumption Theory' has become the foundation for the evolution of varied generic conceptual systems for remembering knowledge.

Much of Subsumption Theory assisted the development of the rationale for the graphic organizer awareness of need for text structures in expository materials as well as the more recent implementation of semantic mapping overviews. Ausubel's theory basically stressed the assimilation of smaller bits of information into larger concepts to improve memory.

According to Richards (1980), the theory also stresses that both the new information and one's cognitive structure are modified during the course of this assimilation process. He states:

> Hypothetically, new material can be assimilated at any "level"; that is, new information can be subordinate, co-ordinate ("combinatorial"), or superordinate to the established ideas in cognitive structure. The most common form of assimilation, however, is subordinate learning, which occurs via the process of "subsumption". (p. 9)

The advanced organizer concept is not a notetaking skill per se, but the cognitive process of hierarchical retrieval plans has determined the need by educators to provide familiar textual overview formats to organize information. The primary function of the advanced organizer is to bridge the gap between new material and existing ideas in the

learner. Richards discusses how organizers achieve this by explicitly presenting a conceptual framework which aids the subsumptive process, consists of a set of high-level "general, abstract, and inclusive" (p. 9) ideas that are placed before a larger, subordinate passage. The advance organizer provides "ideational scaffolding" or a conceptual framework for the lower-level passage that follows.

Ausubel's approach created a study method which emphasized the need to organize information from the general to specific. Although the Subsumption Theory was extremely abstract, Ausubel's research fathered a renewed interest in providing students with useful tools for helping them learn about the structure of knowledge and the process of learning. Meaningful learning to Ausubel requires a deliberate effort on the part of the learners to relate new knowledge to relevant concepts they already possess. To Novak and Gowin (1984), both teacher and student, if they are to proceed most efficiently in meaningful learning, need to know the conceptual starting point. To Ausubel, the one educational principle influencing learning is what the learner already knows (Novak and Gowin, 1984). Unfortunately, Ausubel did not provide a systematic set of structures to assist students in externalizing these metaconcepts and propositions. The most common complaint about Ausubel's advance organizers has been their vague, ambiguous terms.

However, a second line of research into the area of schema particularly relating to reading theory has developed more practical pedagogical techniques and has assisted in developing visual study strategies for all learners (Pehrsson and Denner, 1989). Their notetaking ideas are practical and have a sound theoretical perspective, stressing that people think with concepts and that graphic organizers help students assemble/process information. The semantic organizers or conceptual maps are visual graphic structures which help students to organize ideas as a basic component for study strategies . This type of notetaking strategy has been given many different names, such as structured overview, graphic organizer, semantic organizer, and conceptual mapping or schematic mapping. Pehrsson and Denner (1989) state:

> The term "semantic" in this sense emphasizes the importance of "meaningful relationships" as contrasted to syntactic or grammatical ones in fully constructed sentences and paragraphs. Similar ways of organizing also are known as semantic webs or semantic maps. Similar designs are also called spider graphs, webs, story grammars, etc. There are similarities but also differences. However, the multiple strategies can be studied under the term "Guided Reading Approach". (p. 19)

The maps, graphs and charts used to provide the systematic focus on learning gained much acceptance during the 1970's. The conceptual and theoretical rationale for semantic organizers is grounded in schema theory.

According to Ferguson (1985), schema theory is basically a theory about knowledge. Theoretically, it describes how knowledge is represented and it explains how that representation facilitates the using of knowledge in particular ways. A major premise among schema theorists like Ausubel is that all knowledge is packaged into units called schemata. Schemata firstly serve to provide a framework for classifying concepts and secondly to facilitate understanding by allowing generic concepts to be stored in a network of interrelationships with other constituent concepts.

Both semantic organizers and schematic mapping are notetaking techniques based on schema theory. The major goal of both techniques is to turn information into meaningful ideas which involve integrating new information with prior information that has been stored and structured. Pehrsson and Denner (1989) state:

> It has long been recognized that the key to learning and memory is organization. In recent times, the importance of organization as a major factor in learning and retention has been supported by advances in schema theory. Information brought to the memory system is packaged into individuals' schemata, and it is their organized schemata that form the basis

> for later retrieval. Information becomes meaningful only when some organizing structure (schema) has been uncovered or imposed. (p. 19)

Both semantic organizer and schematic mapping are ideal memory structures to cluster key words, main ideas, and generally organize information efficiently in texts. The notetaking patterns assist students in summarizing, identifying relationships, and clustering disorganized bits of information into a familiar retrieval system; thus learning is made easier.

To Novak and Gowin (1984) schematic or conceptual mapping is an ideal study technique for externalizing concepts and propositions. They believe mapping to be an efficient study tool because maps present a way for students to visualize concepts and see hierarchical relationships. They write: "Concept mapping is such an educational tool; it has been developed specifically to tap into a learner's cognitive structure and to externalize, for both the learner and the teacher to see, what the learner already knows" (p. 40).

Concept maps can be an effective notetaking study technique to extract meaning from textbooks, plan a paper, or even identify any linear sequence of concepts as well as frame ideas in hierarchical order. The semantic organizer is also an adaptable, simple notetaking tool which can be useful across the curriculum in making learning less abstract or complex. According to Slater (1985), "semantic organizers are both language and cognitive tools. As language tools, they emphasize semantic relationships; as cognitive tools, they organize information and ideas" (p. 717).

It seems apparent that what these three notetaking techniques — advanced organizer, conceptual mapping and semantic organizing — do is teach more process than content and build bridges between old and new information which helps students learn. A successful 'learning how to learn' curriculum must provide lifetime thinking strategies for all students.

These notetaking study strategies are well worth learning and can be extremely useful as tools for developing lifelong strategies for all students. They can be incorporated

across the curriculum, as well as being applicable to providing study strategies for life. As Pehrsson and Denner (1989) suggest, "Teach them to learn to learn. That's what real teaching is all about" (p. 14).

Much research has been conducted on which notetaking techniques are most facilitative. According to Alverman and Swafford (1989), researchers may find a notetaking strategy effective, but classroom teachers find it impractical.

> Most authorities agree that summarizing, outlining, underlining, and other kinds of notetaking are important to effective study. Individual students and teachers often favor one technique, a variant of it, or combinations of methods. Enough research has been completed in the area, however, to allow two generalizations: No single notetaking appears to be more effective than another, but any single one is better than none at all. p. 390

Strategies can vary in their effectiveness along several dimensions such as the suitability of the technique to the task or age group. From what has been found in the literature, most researchers feel it is not so much the technique taught, but the daily practice in using the skills in a variety of situations.

The most recent research attention has been on the advanced organizer, semantic or graphic organizer, and schematic mapping techniques, instead of the more traditional notetaking methods. Present studies highlight the important of 'goodness of fit' between the learner's reading ability, school level, notetaking style, and subject studied.

Research and general observations in classroom learning support the belief that notetaking promotes good study skills and habits. Notetaking methods not only serve to help students retain material in memory, but also to focus attention on the structures underlying information. One immediate drawback to using these study skill strategies is that like many process strategies, teachers and students must feel comfortable using them. One of the main goals of this practicum was to provide practical classroom in-service to

teachers and staff on the effectiveness of these notetaking methodologies in organizing learning.

What has been perceived by study skill researchers and practitioners as most important has been the need for a continuous thread of linking skills with academic tasks in content classes. One of the weaknesses of many study skill programs has been the lack of practice in study skill strategies during actual classes. It was for this basic reason the writer's proposed program had to approach its objectives with an interdepartmental viewpoint. The process of integration was perhaps the most difficult factor in this school-wide proposal.

> Tabberer (1982) summarizes this fundamental study skills goal by writing: Teaching that takes place on a separate study skills course is likely to come to nothing if teachers do not reinforce what is learned in the very lessons that pupils tend to see as most important, their everyday subject lessons. (p. 91)

Also, Irving (1982) concludes that individual attempts to introduce study skills into their subject were improved by the involvement of colleagues in other departments. She writes:

> Study skills are universally applicable across the whole curriculum and the time has come for blurring boundaries, not only when thinking of study skills but also when developing curriculum. We should be rethinking the structure of learning as well as what new knowledge and skills must be blended into the curriculum. (p. 91)

Work by Pearson and Gallagher (1983) concerned with the need for systematic, guided practice in using integrated study skills contended that schools failed to provide opportunities in content classes for students to practice such strategies as taking notes, outlining, paraphrasing, and using time management skills to improve study habits. Lovell and Kennedy (1984) discussed the importance of a teamwork approach across the curriculum when considering a study skill program. They too assert that because of the

need to practice of master such lifelong skills, continuous activities must be implemented in all content areas.

Billups (1987) in the journal *Theory and Practice*, writes:

> For educators, teamwork is likely to become more important in the years ahead. The movement toward specialization will accelerate, and the knowledge base of the professions will continue to expand. And increasing specialization means a continuing need for co-ordination. Thus, to avoid the problems inherent in the fragmentation of services, some form of team approach will be demanded. (p. 146)

While Billups is not discussing a study skills program per se, as professions we must move toward increasing co-ordination and teamwork in our schools.

The rationale for a theory of interprofessional practice, according to Snyder (1987), is the result of an ever increasing complexity and rapid social change in the professional's world. In brief, he believes the collaborative skills on the part of a number of academic disciplines will assist the development of a repertoire of problem solving skills necessary to function in a highly technological world.

To the writer, the above assumptions hold value. The cumulative effects by educators in teaching study skills will obviously have a greater effect than educators working separately.

In conclusion, one of the key factors justifying the importance of a school-wide approach is that it encourages teachers to model important notetaking practices during their lessons. To date, much of the writer's dissemination of 'learning how to learn' materials, in-service presentations, interdepartmental study skill procedures, and the thinking skill awareness campaign have incorporated this essential modelling approach to the team learning task.

Working as a team not only involves teachers but also parents. Moskowitz (1988) believes that organizing parent involvement in a study skills program strengthens close

relationships with teachers. He contends that by reinforcing the value of study skill strategies during a parent educational workshop, schools can boost student organizational skills, open the door to the home, and harness parental interest in being effective supervisors of their child's homework. To Rich (1983), the home and the school must work together to produce positive educational change. He writes, "to ensure program acceptance, parent involvement must be viewed as a legitimate activity of the school, and reaching the family must be considered as important as reaching the child" (p. 441).

The importance of involving parents in the context of interacting, identifying, and internalizing the important attitudes, values and skills of the lifelong 'learning how to learn' process is self-evident. Parents need to reinforce and appreciate the concerns, goals, and philosophical approach framing a school-wide program. Comer (1986) provides a suitable conclusion to this section of the literature survey: "Given the complexity of the modern world, today's students need more adult help than children did in the past. Programs that involve parents effectively in the schools can provide a desirable context for teaching and learning" (p. 444).

CHAPTER III

ANTICIPATED OUTCOMES AND EVALUATION INSTRUMENTS

Goals and Expectations

The desired outcomes to be achieved through this practicum were to assist 8/9 students in developing skills in notetaking concepts to organize information as well as to recognize the importance of building fundamental learning strategies for lifelong learning. The purpose of the practicum was to emphasize the development of a variety of study skill components in the areas of concentration, motivation, time and organizational management, mnemonics, and difficulties associated with test taking. In addition, the study was to focus upon, through an interdepartmental team approach, the rationale for a 8/9 unified school-wide skill program in classes to practice basic learning strategies and effective notetaking concepts needed in all subjects to process information. Finally, this practicum was to improve the students', teachers' and parents' level of understanding about the practical effects of 'learning how to learn' by fostering, through a team awareness process, fundamental study strategies which were to enhance home learning.

Behavioral Objectives

The specific outcomes expected from this program were to be translated into the following objectives:

1. Through a variety of planned professional day activities, 70% of the teaching staff will indicate support for the teaching of basic learning strategies and notetaking concepts in their specific subjects on a Professional Development Evaluation Form.

2. All the twenty members of the interdepartmental study skill team who were willing to plan and participate in the notetaking strategies will, after examining their ideas and differing views, indicate on the Teacher Survey a commitment to fostering an interdepartmental team process and a willingness to integrate a variety of notetaking models into their various departments.
3. At least 70% of the grade 8/9 students involved in the notetaking in-service component of the program will indicate on the notetaking section of the Student Questionnaire an improved understanding of the meaning and purpose of developing these learning concepts.
4. At least 70% of the grade 8/9 students associated with the counselling department's learning styles' awareness program will report on the attitude section of the Student Questionnaire motivation and knowledge in areas of general study skill habits.
5. On a writer-designed survey, 7 out of 10 members of the Parent Consultative Committee, when given the choices of a Likert-type scale, will each score 18 or more in their favorable responses to five statements about the rationale, design, and contents of the Parent-Home Guide.

Measurement Objectives

This section will describe more fully how the specific objectives of this practicum were to be measured.

Objective 1

On a writer-designed attitudinal survey to be administered after a professional day on learning strategies and notemaking skills, 7 out of 10 staff members, when given the choices of a Likert-type scale, were to score forty or more in their favorable responses to ten statements reflecting their increased interest and awareness of effective study skill concepts (see Appendix C).

Objective 2

On a writer designed survey to assess the benefits of a team approach to problem solving, all 20 staff participating in the interdepartmental program were to be able to state in writing three positive outcomes derived from this cooperative project. As well, on the notemaking items of the team questionnaire, all 20 teachers were to report a commitment to and an improved understanding of the importance of providing notemaking experiences in their grade 8/9 content classes (see Appendix D).

Objectives 3 and 4

On a writer-designed 15-item knowledge survey, 70% of the grade 8/9 students taking part in three study skill lessons in guidance classes were to score 10 or above on the questionnaire. Similarly, on a 15 item writer-designed survey, 70% of grade 8/9 pupils associated with social studies notemaking instruction, when given the choices of a Likert-type scale, each were to score thirty or more (10 out of 15) in their favorable responses to the use of notemaking strategies (see Appendix E).

Objective 5

On a writer designed attitudinal survey mailed to ten members of the Parent Consultative Committee to evaluate the effectiveness of the Parent-Home Guide, 7 out of 10 parent representatives when given the choices of a Likert-type scale, each were to score eighteen or more on five statements reflecting support of the Handbook's content and use (see Appendix F).

CHAPTER IV

SOLUTION STRATEGY

Discussion and Evaluation of Possible Solutions

A number of solutions, which are relevant to the stated problem and its inferred causes, have been gleaned from the literature. Each solution will be described, briefly, critiqued on approach, focus, and related to the writer's goals.

Making a case for developing a study skills program at the grade 8/9 curriculum is very easy, simply by pointing out the obvious demands of a highly technological society upon students to organize information. In spite of higher levels of achievement, some critical parents feel schools have failed to prepare young people for tomorrow's information society. To some extent, students do lack ability in effective study methods critical to the analysis and organization of data. This general concern with the development of study skills began in the late 1950's and 1960's. Countless solutions to upgrading the study process have been implemented reflecting various philosophies and theories about learning which have been discussed earlier. The work of Bloom (1956) was crucial in initiating and generating a clear perception of what skills schools must focus upon in a study skills curriculum. Recently there has begun a fast growing body of literature on the development of study skills outlining a myriad of solutions to our students' learning problems. However, new information, trial-error strategies, and developmental theories indicate that the majority of earlier instruction on studying failed to transfer the isolated skills across the curriculum. These new solutions and approaches to training in thinking skills have begun to depart from many of the traditional pedagogical theories. A number of new solutions

were taken from the literature which were relevant to the writer's project goals and work setting.

One solution for the development and implementation of a total school study skills program was discussed by Swiderski and Zettel (1982). The authors believe the importance of developing a team approach would ensure a successful integrated program in all content areas. Also, Billups (1987) suggested that the use of a 'teamwork' process could accelerate learning because of its greater attention to collaborative efforts to communicate decision-making strategies and cooperative action. As a consequence, Billups described how this social process could produce a synergistic quality which increased an improved cognitive grasp and emotional support for learning. This interprofessional team dimension in learning and change was an important component of this project. A major issue addressed during this practicum was providing the staff opportunity to participate fully in grappling with the development and implementation of this integrated study skills program.

Another solution for increasing teacher participation and awareness of a program's objectives was described by Barron, McCoy, Cuevas, and Rachal (1983) in their new study skills model which stated that an integrated team concept facilitated the implementation of new teaching techniques. They believed in-service programs should be provided to involved teachers to give an opportunity to gain a team potential and a perspective as to the value of a total school involvement. For the writer, these comments suggested that staff development be organized in the form of a staff professional day on teaching study skills. Possibly guest speakers would be invited, as well as opportunities for various large or small team meetings to debrief and integrate this information into their fields of expertise.

Pink and Wallace (1984), in a case study of planned school change, outlined the importance of teachers understanding the rationale for a school program and suggested that an innovation be 'data-driven' with information based on current research. For the writer,

this insight suggested that pertinent literature on study concepts should be made available to teachers and disseminated during team meetings. Henson (1987) felt the cause of a general lack of current cognitive theory in the classroom lay in the poor association between theory and practice. Essentially, Henson believed classroom practice had failed to keep up with the new understandings of learning and teaching. He contended that the knowledge about the thinking processes cannot proceed at a faster rate without an improvement in teaching methodology.

The previous comment suggested that to increase teachers awareness, commitment, and understanding of learning, a brief literature-like format summarizing information on relevant learning theorists should be disseminated. A significant part of this practicum was based on providing students the opportunity to learn how to use a system of notetaking concepts to organize information. It was important, for example, that teachers become aware that many of the theories behind this practicum were not innovative, but have lain dormant in education for years. For example, according to Einstein (1951), learning was the process of conceptualizing and thinking was the ordered series of memory-pictures. Interestingly, Bruner (1960) too saw the facilitating of learning when the educator assisted the correct grouping of these constructs.

A recent article by Joyce (1988) also had relevance to the stated problem and provided support for a solution to this practicum. Joyce echoed the need for teachers to be provided with research which supported new strategies in teaching. He felt over the past twenty years certain teaching models have dominated instructional approaches. In addressing the rationale for teaching study skills, teachers must become familiar with the works of Taba, Schwab, Bruner, Piaget, Ausubel, and Hunt. To the researcher, these theorists have been vital in developing the information-processing models which grounded much of the rationale for teaching various learning methods necessary in processing information.

Irving (1982) in addressing study skills across the curriculum stated that teachers would be more supportive of skills programs when: school in-service sessions were organized with ideas generated by outsiders; a rationale for mutual dependence on how their subjects could be positively affected was stated; 'simple adjustments' were encouraged which would be clearly and easily done; the awareness of and reinforcement of an overall plan which improved everyday teaching was created; research which supported a whole 'bandwagon' approach was disseminated; and finally, shared teaching skills which were relevant to all subjects were identified. For the writer, through personal contact, professional committee meetings, and staff department meetings, there have been many opportunities to discuss the skills topic and distribute information. Also, it was easy to arrange special meetings with departments to discuss or debrief relevant strategies.

Graham and Robinson (1984) stated that staff barriers which slow the integration of study skills across the curriculum could be reduced or remedied by following three main steps. They suggested using teachers, students, and curriculum guides to identify or highlight information-processing skills common to all subject areas. They believed that when such skills were identified, shared interdisciplinary teaching could develop. Secondly, organize a network of supportive teachers interested in the idea of implementing a study skills program and plan a school-wide workshop to introduce information on the skills. Thirdly, Graham and Robinson suggested developing and highlighting learning strategies, assignments, and general resource materials to be integrated into the curriculum.

These ideas and suggestions held relevance when introducing a 'learning to learn' program. The organization of a small cluster of teachers interested in study skills was an excellent initial approach to get staff to identify, approve and employ the concepts in the program. The writer appreciated the fact that a total subject integration at this point was an ideal and would require several years of work to achieve. However, the establishment of a core group of study skills teachers, planned workshops, and classroom in-service disseminating and modelling information-processing techniques were the first steps.

Snyder (1987) also provided important factors to consider in developing an interprofessional team. He suggested that the process of achieving a sound professional identification and comprehensive goal was important as well as maintaining open lines of communication for negotiation and implementing action plans. Snyder believed that small changes in colleagues' attitudes could result in large changes in behavior.

Finally, Mickelson (1988) stated that to ensure success in program implementation, a concept of general method should be planned. Learning and teaching were grounded by interest. Advances in new curriculum design or experimentation with teaching procedures could not be brought about without the planner gathering and/or disseminating data which met and reflected group needs.

Study skills is a broad term and its remedies are as varied as its concept. Approaches ranged from upgrading reading, writing, and organizing skills to various motivational or attitudinal facts perceived vital to academic development. It was clear from the study skills movement that notemaking held a special position in this new theoretical understanding of the learner's cognitive structure. It was clear to the writer that notemaking in the traditional sense could not remedy many of the learning difficulties experienced by students. However, as stated earlier, the practicum provided student and teacher articulation about both effective and efficient study strategies, as well as providing knowledge about recently-developed thinking concepts. The reader will notice that the writer altered the traditional 'notetaking' terminology to 'notemaking'. One of the problems inherent in previous notetaking programs was the lack of student awareness of the rationale for the development of a notemaking system. As well, students were not allowed to individualize the imposed techniques. Notemaking reflected a more student-centered approach and took the viewpoint of the student rather than the teacher in how notemaking should be approached. Notemaking remedies should be based upon a developmental rationale and be grounded in an understanding about thinking processes.

Notetaking research and its demonstrated effects, as mentioned earlier, go back decades. Much of the framework was based upon Ausubel's (1968) subsumption theory in which meaningful learning was said to be facilitated by the active process of paraphrasing, organizing, and other notemaking functions. Palmatier (1973) developed a notetaking system for learning for college students which focused upon developing one/two column writing. His solutions to organizing material in a subordination of items was very effective in improving retention of data by college students. Experiments by Barnett, Di Vesta, and Rogozinski (1972, 1981) provided further support for the findings that certain notemaking procedures might function as an effective strategy for improving retention.

With recent knowledge regarding metacognition, taking notes facilitated a transfer-process necessary for learning. The effects of notemaking and recall had basically been studied during the sixties and seventies on college students. Not until recently have researchers recognized the power of visualized patterns in structured notemaking for the learner. Strategies like spooling, webbing, mapping, and other reading aid concepts have become popular in solving learning disabled adolescents' and English as Second Language students' difficulties in functioning in today's schools. A recent article by Watson (1986) provided six visual notemaking pictures to help learning disabled learners develop independent reading/study habits. The use of schematic mapping as a study and notemaking strategy for understanding concepts was described by Ferguson (1985) in effectively creating visual/graphic structures to facilitate learning. Apparently, Reinhart's (1980) schema theory was a powerful notemaking strategy in developing a network of interrelationships with other concepts for students. He believed it was simply an efficient skill to assist in remembering components. For the writer, visual notetaking strategies were practical and effective methods for enhancing the processing of information across the curriculum.

A notemaking solution implemented and found in the literature was discussed by Stein (1987). The author believed that T-line, stickperson, and other visual pictorial notemaking enabled the student to use thinking strengths from both brain areas. The use of these visual writing concepts should be taught early in the child's education. Although this technique was somewhat elementary for many secondary students, the idea of encouraging free-form notetaking methods to simplify complex concepts would be an effective activity in enhancing students' experimentation with notetaking methods.

Another strategy suggested in the strengthening of study skills was the use of a reading aid called the advanced organizer. There was a great body of evidence that supported the theory that by the use of macro guides like comparison/contrast, main idea/detail, or cause/effect charts that the young reader improved their understanding of the reading assignment. This reading and notemaking aid had been utilized in many studies. Barnes and Clawson (1975), in their historical twenty-page analysis of thirty-two studies, stated that structural organizers were a powerful tool to studying.

Again, to the writer, this notetaking method would assist students in organizing information from texts by providing multiple structures which stressed the identification of main headings, key vocabulary, and the sequencing of data in a hierarchical fashion.

Also in support of the use of structural organizers in developing study skills, Slater, Graves, and Piché (1985) examined the effects of providing students with information about the common organizational patterns of expository passages and found significant improvement in recall of ninth grade students' comprehension. This recent study validated the use in the practicum of teaching semantic structures using cause-effect problem solution charts for reading passages.

In a recent book, *Improving Study Skills*, Selmes (1987) recommended that notetaking was a fundamental goal in the program because it was a common source of difficulty in studying, a universal skill needed in all subjects, and the main storage mechanism for facts or ideas taught. He supported the use of visual notetaking organizers

like mapping, spooling, and webbing largely because they offered a graphic tool to organize and simplify information. This approach would help many students improve memory and show how to organize information on their own. Many of the grade 8/9 students did not know how to organize knowledge in a simple manner. To Selmes, these study strategies were well worth learning and well worth teaching.

Bowers and Farr (1984) concured with the above educators and felt that middle schools could develop and transmit effective study habits and critical thinking and reading skills by focusing upon use of the notebook. They believed an emphasis must be placed on teaching and reviewing notetaking methods as well as providing students practice in studying from their own class notes. To the writer, all the study components could be reflected largely from how the grade 8/9 students organized their work. For this reason, the project put a heavy emphasis upon providing students and teachers with procedures and methods to improve the general organization, neatness, and structure of notebooks.

Castagna and Codd (1984) also reported that by teachers focusing on notebooks, positive study habits were enhanced and developed. This article had relevance to the stated problem because it described a study skills program designed and implemented by a counsellor which stressed, among other things, the organization, notetaking practice, and review of homework in notebooks. From the daily encouragement of the use of underlining and summarizing in notebooks, study skills improved.

Finally, Smith and Tompkins (1988) considered that structured notetaking results in the heightened activation of several cognitive processes. Firstly, they believed this structure encouraged the selecting of main ideas to retain in notes. Secondly, students learned to paraphrase and add prior knowledge to passages. Thirdly, the study skill concept had the potential of promoting understanding and retention of content. Notetaking incorporated the main goals of study skills and was beneficial to not only low-ability students but also to learners across every subject area. The benefits were that this study strategy would be fun because students could invent new structures, it would lead to better

retention of reading passages, and would be useful in recording daily lectures or planning compositions.

Another solution deemed vital to a study skills program was its public image. A positive image could be built through the recruitment of parent support for the activities. Rich (1989) suggested that educators must make hurried parents aware of the positive success of home involvement in promoting study skills. She described how study programs could be highlighted through informative study guides and newsletters providing the purpose of the program. Lutz (1986) suggested parental involvement in the secondary reading and homework program could be encouraged by promoting a fair or workshop where a variety of activities, discussions, interesting displays, and guest speakers would increase the awareness of the program's philosophy and goals. A Study Skills Awareness Week or special evening event was an effective way to encourage a mutual understanding between school and the community about the importance of the home in the supervision of homework or in the development of lifelong study concepts.

Several other authors mentioned the importance of parent participation in boosting study skills at home. Both Mosokowitz (1988) and Cottier and Koehler (1978) recommended schools organizing parent education sessions and the development of homework guides to motivate parents to clarify to the child proper procedures and habits of effective daily studying. Although the guide would be costly and time consuming to produce, the solution, on the other hand, could be created from the teaching materials used in the counsellors' awareness campaign. The guide would be an excellent vehicle for disseminating study information to all students and parents in the school as well as its applications to the school's counselling program on a regular basis. For the busy parent, this guide would possibly initiate dialogue with children which would reveal school problems or influence the improvement of better study habits at home.

Furthermore, Graham and Robinson (1984) discussed that study guides did provide students and parents with an overview of general and specific objectives on how to

develop learning skills but emphasized that guides alone could not solve homework problems. Guides must provide clear cut sets of directions which focus on the key study techniques to maximize efficient learning. For this practicum project, the guide was only one of several proposed activities to encourage accurate notetaking, organization, and test preparation strategies to improve study concepts. This solution emphasized a team philosophy, ensured that the public was informed of the school's goals, and helped to maintain the school's enthusiasm for and commitment to enhancing student study skills.

Description of and Justification for the Action Plan

The writer's personal solutions to increasing knowledge across the curriculum about learning 'how to learn' will be briefly discussed. The writer employed a multidisciplinary team approach for integrating a variety of newly-identified conceptual learning strategies.

Firstly, the writer used varied communication and public relations strategies to increase teacher knowledge about critical thinking processes helpful in learning. Through several department cluster meetings in June of 1989, the writer disseminated brief reviews of literature and advocated a repertoire of information processing concepts to broaden staff members' understanding of study approaches currently being used in the classroom. A rationale for the development of a team approach was fostered by the discussions related to the writer's presentation. Two professional school-wide development days were planned in September which, through several guest lecturers, examined research, explored teaching practices, and reinforced the need for a team focused approach to integrating study concepts. Networking with the Staff Professional Development Committee assisted this process. The writer, because of the scope and complexity of the project, assigned departments specific study areas in which to prepare/organize materials. Although each department identified a separate study skill concept which they felt was essential to coping in their subject, common goals and a general collaborative climate were fostered through

monthly interdepartmental meetings. The project identified key personnel, emphasized effective strategies for all students, and specifically addressed the vested interests of each cluster of subject teachers.

To encourage each department to evaluate and identify learning to learn concepts in their content areas, the writer sought the cooperation of the principal. The administration's discussions with department heads about the importance of learning styles and learning strategies provided a springboard to elaborate further on relevant cognitive tools for students. To develop a school-wide understanding of study skills, an awareness campaign organized by counsellors and administrators presented a series of large, attractive posters each month designed to identify basic procedures, knowledge, and understanding in the areas of organization, time management, notetaking, study setting, test taking/preparation, and thinking strategies. This marketing or promotion strategy early in the school year enhanced the rationale for acquiring skills contained throughout the core subjects. An attempt was made to model and integrate various notemaking structures into these key visual posters when presenting the learning strategies. Teachers were encouraged to display and refer to the posters whenever possible.

Another component adopted by the grade 8/9 counsellors in the awareness campaign was the teaching of positive attitudes and effective organizational habits to grade 8 to 10 guidance classes. Many of the difficulties reported by teachers and students in adjusting to and coping with the grade 8/9 years were discussed over a period of four classes. The counsellors and writer provided a web of coping strategies which assisted grade 8/9's to initiate proper approaches to setting goals, scheduling homework, and studying purposefully. Examples of tactics, patterns of seeking information, and self-management procedures were also provided on handouts to ensure an overview of these skills.

An important focus of the solution strategy was to inform staff and students about a collection of notemaking concepts effective across the curriculum. Because of the

complexity of implementing this project, the writer taught seventy percent and utilized the other thirty percent of unpaid time to co-ordinate in-service to staff, prepare/organize materials, and to teach over forty model lessons to students on how to integrate various notemaking structures into content areas.

The notetaking in-service solution followed simple 'how-to-do-it' presentations to assist students in using notetaking structures to make sense of new information. All grade 8/9 students were given three classes of notemaking strategies. Charts, graphs, and webs critical to paraphrasing, summarizing or drawing inferences were explained. Time was given to teachers and students to grasp and practice the various techniques before further classroom presentations were planned. A variety of practice lessons were left with each class to generate subject integration, and reduce any anxiety about using new learning techniques. The classroom demonstrations provided a context for the writer to model these new concepts in an exemplary manner. These forty notetaking in-service classes emphasized learning by watching and doing. Because of this focused approach, many of the students began to model the learning process, not in isolation from content. It was important, however, that the modelling process be demonstrated not only by the writer but also by the teacher related to the subject. Implementing a metacurriculum requires teachers working together to improve their instruction.

Another organizational vehicle used to develop a network or team perspective for this project was the development of a home study guide and the organization of a parent evening workshop which presented helpful hints for parents and students in encouraging home learning. Lifelong learning strategies and practical survival skills were discussed at a parent night in late fall. Each department provided readable and valuable information about various study skill components generic to improving homework. The parent night presentation promoted the importance of a cognitive "tool box" or repertoire of skills. Through a department head cluster or study skill resource team process, each subject group

selected and focused upon a specific study component deemed relevant. Parents were encouraged to model and stress these knowledge acquisition skills.

The rationale for the Parent-Home Study Guide was four-fold. Firstly, parents would value the information they received from school and needed to take ownership for their child's education. Secondly, parents and students would through talking about the book's contents become knowledgeable about a variety of vital learning concepts. Also, the solution provided an effective way for the writer to increase a team frame of reference by sharing in this common goal. Finally, in the case of the staff, it reinforced the school's commitment to gaining a better understanding about learning, and to encouraging each department to assess their teaching priorities while working together to foster parent support of proper home learning. The evening session for the parents provided the writer with an opportunity to present patterns of information organization which were successful, suggestions for productive test preparation, a variety of notetaking concepts, and other helpful hints emphasizing the importance of parents encouraging their children to develop a study skill awareness.

To develop an appropriate climate for implementing these problem solving solutions, the vested interests of others involved had to be recognized. As with any educational change, a key issues central to the planning process were involvement and communication. Before this practicum project was undertaken, parents, students, and staff had to be convinced that the change offered an improvement over current practices. The professional workshops, notemaking in-services, resource team process, and parental procedures had as their aims the increasing of confidence, the fostering of ownership, the promoting of collegial consultation, and the raising of the consensus level. Staff are often anxious about being forced to redesign course material or shift away from well-established forms of knowledge. In order to advocate and reinforce the concepts of interdisciplinary learning and an integrated curriculum, it was important to recognize and enhance those

shared teaching concerns in order to develop a team focus. Empowering all shareholders increased their involvement and participation.

CHAPTER V

RESULTS, CONCLUSIONS, AND RECOMMENDATIONS

Results and Conclusions

The practicum's first objective involved the analysis of the first three teacher in-service days. A writer-designed written survey was distributed to fifty-six staff members during a professional development day in late September. The teacher attitude survey contained ten statements designed to measure their increased interest in and awareness of the teaching of study strategies and notemaking skills presented during a one day workshop organized by the writer. The statements were positively expressed in a closed form with a Likert-type scale calling for a graded response to each statement. To score the scale, the response options were credited 5, 4, 3, 2, 1, from the favorable to the unfavorable end. The sum of the item credits represented the individual's total score for each section. Of the fifty-six surveys distributed, twenty-seven were handed in before the end of September. The first objective for his practicum was:

1. On a ten-itemed teacher attitudinal survey administered after a professional day on learning strategies and notemaking skills, 70% of staff members will report an increased interest and awareness of effective study skill concepts.

This objective was met. A chart (see Table 1) showing survey scores, their frequency, and their cumulative frequency has been provided. The mean and median scores for this ordered array have also been displayed. Approximately 9 out of 10 teachers scored forty or more. The mean was 45.2 and the median score was 45.

Table 1

Group Frequency Distribution and Cumulative Distribution of the Teacher Attitude Survey Scores from the Learning Strategies Workshop

Score Class	Frequency	Cumulative Frequency
48 - 50	9	27
45 - 47	11	18
42 - 44	2	7
39 - 41	3	5
36 - 38	1	2
33 - 35	1	1
mean 45.2 median 45		

In the writer's opinion, there were several reasons why the objective was met. Firstly, the five hour workshop was designed to build teacher interest in the need to develop a variety of study strategies by first heightening their understanding of different learning styles. A modified version of the Meyers-Briggs assessment tool was administered to each colleague, individual styles were then grouped, and a variety of thinking skill activities was presented to dramatically demonstrate learning style. For many of the faculty, being conscious of their own thinking/problem solving modality created a curiosity and interest in learning how to help students focus on common study processes. Secondly, during the course of the day the staff were given instruction in the implications of metacognition theory upon the curriculum. Thirdly, the guest speaker's presentation was humorous and well suited for developing a staff's interest in further in-service on learning skills. Fourthly, previous staff development activities had not been highly

organized nor fully supported by the administration. By presenting each staff member with a seventy page Study Strategies Manual, there was created, in the minds of many, a school commitment to develop this concept across the curriculum. Finally, because of the close working association with the principal on this project and the incredible support from the Professional Development Committee members, the whole area of study skills has been given high priority for future staff in-service.

The writer's second objective was to design a written survey with two sections to measure the teachers' attitude toward the collaborative approach to teaching study skills and its team benefits. The first section was designed to elicit the team's positive/negative perceptions about the participation in an interdepartmental project. The second section was to present positively expressed questions with yes/no responses to each statement to measure the teacher's support of the learning of notetaking skills across the curriculum. The data were collected from twelve teachers during late March and early April. The descriptive plan for analyzing the personal opinion section is Table 2 showing a short listing of common responses. The number of teachers who wrote three positively expressed opinions is shown. For the second section, an individual item analysis giving the numbers of yes/no responses to each notemaking statement is provided (Table 3). The second objective for this practicum was:

2. On a writer designated survey to assess the benefits of a team approach to problem solving, all 20 staff participating in the interdepartmental program will be able to state in writing three positive outcomes derived from this cooperative project. Also on the notemaking items of the team questionnaire, all 20 staff will report a commitment to and an improved understanding of the importance of providing notemaking experiences in these grade 8/9 content classes.

Statistically, the second objective in the practicum was not met because only 12 staff members participated fully, not all 20 as envisioned by the writer. Although the majority of subject departments took part in study skill meetings and implemented many of

the learning strategy materials (assignment calendars, time management routines, test taking, notemaking structures or awareness posters), the staff did not participate fully in all aspects associated with the above objectives to qualify under the practicum's team objective outlined in the proposal.

For Table 2 the responses have been organized into social, academic and organization outcomes. All 12 respondents reported three positive statements. The item analysis chart suggests that all 12 staff members are developing an awareness and commitment to the teaching of a variety of notemaking concepts reflected by these general statements.

Section 1 Staff Survey

Table 2 Teacher Statements Regarding The Positive Benefits Derived From a Collaborative Approach To Teaching

Category	*Actual/Potential Benefits Expressed*
Social Outcomes	• Share responsibility and support in planning • Change of pace, more enjoyable • Individuals able to share special skills • Two heads are better than one - if only for moral support • Successes and failures are shared • It's fun, not so lonely when working collaboratively • Diminishes isolation and increases the potential of combined talent
Academic Outcomes	• More ideas generated • Combining knowledge and techniques • Academic continuity • Get exposed to innovative ideas
Organizational Outcomes	• More effective use of individual planning • Great supportive organization • Not repeating effort to design programs

12 out of 14 wrote 3 or more positive outcomes.

Section 2 Staff Survey

Table 3 Teacher Statements Regarding The Positive Benefits Derived From The Notemaking Grade 8/9 Program

Personal Opinion Statement	*Yes*	*No*
1. I have during this year, gained a better understanding of study strategies through the class activities presented.	10	2
2. I have, during this year, developed an awareness for encouraging notemaking strategies like spooling, webbing and outlining concepts into my classes	12	0
3. I have during this year, gained an increased understanding associated with notemaking and its use of varied graphic structures to improving reading.	8	4
4. I feel it's important to provide notemaking experiences in grade 8/9 content classes.	9	3

In the writer's opinion, there were several main reasons why objective two was not met. Firstly, given the school's long standing organizational pattern, teacher demographics and discipline focus, many teachers were reluctant to adopt the new learning skill concepts. Much of the skepticism by particular subject departments to coordinate the development of study skills largely stemmed from their traditional interests to maintain clear curriculum borders or control over a specialized subject focus. In other words, several members of departments viewed the practicum reforms in a classical subject-centred perspective and tended not to fully support the teaching of process learning strategies within their disciplines. Some staff were very sensitive to the integrated curriculum philosophy because it either in their view, increased teacher workload, fragmented specialized knowledge, or was impractical to implement.

Secondly, the writer's projected goal of 20 team participants was possibly too optimistic and should have been less than 50 per cent of the teaching staff at the school given the factors briefly discussed. Although the majority of colleagues appeared interested and noticeably positive about the project, only twelve were associated fully with the in-service, department meetings, awareness and notemaking components. The writer is quite optimistic that the practicum has increased a school wide consciousness of the importance of teaching process skills and notemaking concepts in the various curricula. The simple item analysis reflected that all respondents show a positive attitude toward notemaking and study strategies programs as being beneficial for students. The writer was gratified that on the principal's recent school wide survey 80% of the teachers recognized the teaching of process skills as important to student learning.

The practicum's third/fourth objectives were associated with increasing the grade 8/9 students' knowledge of effective study habits and understanding of the use of notemaking concepts. Firstly, for objective three a writer-designed survey was distributed to 286 grade 8/9 students after participating in three hours of study skill lessons taught by the writer integrated through the guidance classes during the months of October, November

and December. The fifteen true/false personal statements were designed to measure the students' knowledge about appropriate study habits. To calculate the sum of the correct items represented the total score. In brief the third objective was:

3. At least 70% of the students taking part in the three counselling study skill classes will score 10 or above on a 15 true/false type Learning Habits Survey.

Secondly, for objective four, similar strategies were implemented. Two hundred ten grade 8/9 students were surveyed after two to three hours of notemaking lessons taught by the writer integrated through the socials studies classes during the months of December, January, and February. The notemaking data from the series of fifteen opinion statements were calculated by scoring the graded response options with credits 3, 2, 1 from the favorable to the unfavorable end. The fourth objective was:

4. On a 15 item student questionnaire, 70% of pupils will report an increased use of notemaking concepts taught to them.

Table 4 Grouped Frequency Distribution/Cumulative Frequency Distribution of Study Habit Scores on Section A of the Learning Strategies Survey

Score Class	Frequency	Cumulative Frequency
13 - 15	122	286
10 - 12	106	164
7 - 9	44	58
6 - 8	10	14
3 - 5	3	4
0 - 2	1	1

Median 12
Mean 11

Table 5 Grouped Frequency/Cumulative Frequency Distribution of Notemaking Scores on Section B of the Learning Strategies Survey

Score Class	Frequency	Cumulative Frequency
44 - 45		
42 - 43		
40 - 41	3	210
38 - 39	0	207
36 - 37	8	207
34 - 35	27	199
32 - 33	19	172
30 - 31	35	153
28 - 29	37	118
26 - 27	24	81
24 - 25	19	57
22 - 23	20	38
20 - 21	13	18
18 - 19	5	5

Median - 29.3
Mean - 29

Table 4, showing study habit scores, indicates that objective 3 was met, with 83% scoring ten or more on the survey. The mean score was 11 and the median score was 12; approximately 80% out of 286 students scored ten or more.

The researcher suggests there were again several possible explanations why this objective was achieved. Firstly, the overall approach of the lessons was designed to present activities to raise student awareness of the powerful potential when applying strategic metacognitive principles to learning or studying. Activities conducted during the classes involved an emphasis on discussion as well as student participation in proactive decision making, information organizing, test taking concepts, rules of learner independence, and other contemporary awareness techniques vital to teaching a broad range of study skills at the grade 8/9 level. The impact of a twenty minute individual learning

assessment profile and the interaction between teacher and student about the cognitive tools necessary for academic success generated from the writer's handouts helped create learning awareness opportunities for students. Secondly, this awareness climate was reinforced by the counsellors comparing real world learning skills with those needed for school. Student dialogue about their own strategies for organizing information, preparing for exams, taking notes, and scheduling homework increased their knowledge of common thinking skills interrelated to all subjects. Thirdly, the sequence of the poster campaign, school assemblies, and the general inter-departmental use of the writer's graphic learning strategy materials in September/October helped transmit and build a school wide focus on basic organizational procedures needed to survive in school. In brief, the students were motivated by the discussions and class procedures in the counselling class, and in addition reinforced by the content course teachers. Finally, in retrospect, the writer believes possibly the study strategies section was much less difficult than the notemaking part of the survey.

Although objective 4 was not statistically met, with only approximately 4 out of 10 students scoring above thirty or more, the writer believes the practicum achieved a favorable end. This will be discussed in detail in the conclusions of this document. Table 5, showing the 210 notemaking survey responses, indicates that only 92 pupils (40%), rather than the behavioral objectives of 147 students (70%), scored above 30 or more in their favorable responses to 15 statements in section II, reflecting their perceived use/understanding of notemaking concepts. The mean was 29.3 and the median score was 29.

Again, in the writer's opinion, there were several possible explanations why objective four was not met. Firstly, it is extremely difficult to predict from this basic attitude survey that, in fact, the program has failed to generate or influence the use of a variety of notemaking strategies to aid reading content. The researcher suggests that the

narrow scoring range of 3 for Always, 2 for Sometimes and 1 for Not At All meant that choosing Sometimes instead of Always effectively lowered their results.

Secondly, another insight gained from the practicum experience was that possibly the notemaking program moved too quickly from the teacher in-service to the classroom demonstrations. Several teachers seemed hesitant in applying the necessary notemaking strategies in their social studies assignments. For example, many of the review activities were not used by the staff. Therefore the students were not given the specific practice necessary between the writer's demonstrations to initiate a change in behavior or attitude. Another reason for this lack of integration stems from the simple fact that several colleagues took the opportunity to leave their classrooms during the demonstrations and therefore did not become informed, confident, or gain the needed modelling to apply these new learning strategies to social studies.

Although the techniques of using reading organizers such as mapping, diagraming, webbing, or outlining were modelled during demonstrations by the writer, the short time frame could not reinforce the principles and procedures necessary to modifying traditional notetaking perceptions held by the students nor the inconsistency between teaching techniques.

The final practicum objective was associated with the usefulness of disseminating a Home Study Guide to improve parent and students' knowledge about studying. A writer-designed parent opinion survey was distributed to 10 members of the Parent Consultative Committee. The five statements were designed to measure the parents' attitudes towards the effectiveness of the study tips resource book. The statements were again positively expressed with a Likert-type scale with credited responses of 5, 4, 3, 2, 1. The fifth and last objective of this practicum was:

5. On a writer-designed survey, 7 out of 10 members of the Parent Consultative Committee, when given the choices of a Likert-type scale, will each score 18 or more

in their favorable responses to five statements about the rationale, design, and contents of the Parent-Home Guide.

This objective was met. Table 6, showing opinion survey scores, their frequency, and their cumulative frequency (section I) is provided as well as the item analysis (section II). In the first section, approximately 8 out of 10 parents scored 18 or more out of 25 on the five statements reflecting Home Guide support. In the second section, an individual item analysis giving the number of responses to each question also suggests the Home Guide is helpful to parents with children experiencing academic difficulties. The design, contents and rationale received favorable responses by committee members. For the writer, objective 5 was met because overall the members of the committee were highly supportive of ideas which link the home with the school To some extent, the Year 2000 promotion of process skill focus and the writer's evening presentation ensured a receptiveness to implementing this public relations strategy.

Table 6 Parent Opinion Survey Scores
Grouped Frequency/Cumulative Frequency Distribution

Score Class	Frequency	Cumulative Frequency
24 - 25	2	10
22 - 23	4	8
20 - 21	1	4
18 - 19	3	1

Section 1 Item Analysis of Parent Survey

1. The contents of the guide represents interesting and varied study skill concepts.

AA	a	?	d	DD
4	5	1		

2. The design of the book presents information in a clear and organized manner.

AA	a	?	d	DD
5	3	2		

3. The Home Guide would be a helpful resource for parents with children experiencing academic difficulties.

AA	a	?	d	DD
7	3			

4. The handbook should be made available during parent/teacher conferences.

AA	a	?	d	DD
5	4	1		

5. Overall, the resource is useful in providing an opportunity for parents and students to begin discussing how to improve homework strategies.

AA	a	?	d	DD
5	3	2		

Conclusions

In a recent article about the importance of increasing students' repertoires of learning strategies and developing specific skills for problem solving, Derry (1989) asserted that educators must reassess present teaching attitudes towards learning in schools.

> In most school learning situations, strategies should be devised with the aim of creating usable, rather than inert, knowledge. Learning is a form of problem solving that involves analyzing a learning task and devising a strategy appropriate for that particular situation. Students who receive good strategy learning during their years in school can acquire a form of knowledge useful in coping with the wide variety of learning situations they encounter throughout their lives. (p. 4)

This practicum has attempted to make teaching staff and students more aware of key learning skill principles and procedural strategies useful in organizing information.

The fragmentation of curriculum into isolated disciplines must be restructured to encourage the interdisciplinarity of common teaching/learning strategies. No longer should a curriculum priority be the regurgitation of information. Instead the process of developing understanding must be emphasized for meaningful learning to occur. Quite simply, teachers must bow to the internal and external pressures for change if they want to remain true professionals. Many of the project's broad philosophical goals challenged and

provided alternatives to the school's traditional subject discipline organization. During the project the staff were encouraged to employ a cooperative team approach in order to better meet the needs of all students and to implement innovative instructional practices that would enable adolescents to develop a more varied repertoire of learning strategies.

An important component of this project was to provide workshops for staff as a means to increase awareness about study skill strategies. In the writer's opinion, being a member of the Professional Development Planning Committee was an effective networking strategy for enhancing staff participation and providing support for the resource manual, poster campaign, homework sheets, and other interdepartmental 'learning to learn' ideas.

The practicum encouraged a broad range of practical learning techniques critical for success in secondary school. Opinions and comments expressed by students and parents throughout this project supported the premise that study strategies had not been taught previously on a consistent basis. Therefore, firstly, the focus of the instruction during guidance classes was to demonstrate and discuss how to improve student thinking and study strategies. Those guidance sessions helped to increase student awareness of the importance of organizing information. Secondly, during the classroom notemaking in-services, the teachers observed demonstration lessons given by the writer and gained some understanding of what they could do to help students become more active and effective learners. This simple co-operative strategy challenged a longstanding perspective of teacher isolationism. The demonstrations employed a team approach and encouraged interaction between subject disciplines.

Some seeds of change have been sown for the coming year and the need for an interdepartmental perspective will continue to be emphasized. Furthermore, the Ministry's Year 2000 (1989) document proposing wide sweeping curriculum/assessment reforms, acknowledging the importance of a collaborative climate within the secondary schools, and emphasizing the process of learning was helpful in promoting many of the practicum's concepts. However, the prospect of a shift away from a subject-centred organization has

brought substantial concerns from teachers. Many staff were critical about focussing upon a common curriculum which recognized the importance of developing thinking skills over content knowledge. They believed this stress on curriculum integration would lessen student subject accountability and homogenize the knowledge associated with discrete disciplines.

In summary, although several of the objectives at face value were not met, it is clear much of this stems from the optimistic behavioral outcomes, as well as the lack of knowledge about the difficulties related to integrating learning strategies across the disciplines. The practicum has provided the writer with many challenges and opportunities for personal reflection and professional renewal. First of all, the literature search process allowed the writer to reflect upon the transition of study skill concepts taught in isolation to a holistic process-oriented view called 'learning to learn' and most recently to a perspective on study skills involving learning strategies and metacognition concepts. The writer has become sensitive to and interested in effective ways of restructuring information in order to increase student learning, (e.g., main/sub-headings, cause/effect, comparison/contrast, webbing, clustering, graphing, spooling, and outlining). The contemporary methods of notemaking increase each learner's opportunities to construct personal meaning from information.

Collegiality was an important premise underlying this project. Although the staff appreciated the importance of the collegiality in achieving goals, factors such as teacher workload, self interest, time constraints, curriculum accountability, lack of expertise in using a team approach, an unwillingness to change and staff demographics (aging teaching staff) impeded the collaborative process.

In terms of professional renewal, the practicum has allowed the writer to engage in a meaningful problem solving process; to implement innovative learning strategies with his own and other teachers' classes; to promote in-service on metacognition, thinking

strategies, learning styles, and notemaking skills; to design workshops in which he could share his ideas and expertise with staff members/district educators.

Recommendations

1. Teachers at all grade levels should ensure that students have opportunities to develop a variety of universally desired organizational strategies and not focus on any one single skill.
2. Teachers should focus increased instructional attention on graphic, structural, and pictorial strategies which assist students in reflecting on what they have read, viewed and heard.
3. All teachers should 'model' how to construct graphic representations which help analyze text and organize key concepts into relationships with other ideas.
4. Students should be motivated and given opportunities throughout the curriculum to practice constructing graphic notemaking techniques.
5. Teachers must invest time and make a commitment to integrating metacognitive knowledge into their subjects and to utilizing 'learning to learn' concepts.
6. All members of the school's educational community should engage in a sustained effort to encourage the integration of subjects by identifying a repertoire of common thinking skills mutually applicable across the curriculum.
7. The school, in cooperation with the district, should ensure the development of an interdisciplinary perspective by increasing the opportunity for interdepartmental involvement in the common curriculum concepts by providing funding for release time, for planning, or identifying emerging concerns.
8. The learning strategy awareness program should continue its advocacy by networking with departments, disseminating Year 2000 material, maintaining involvement in Professional Development Planning, and providing a collaborative climate within the school promoting metacognition in-service.

9. The School Board should begin to recognize the importance of co-ordinating the teaching of critical thinking skills and problem solving in schools, thus reversing the trend of teaching specialized content knowledge in a discrete subject area.
10. In addition, the recommendations of the Year 2000 document (e.g.: more flexible time schedules, more varied groupings of students, more teacher collaboration, and more integrated subject matter) should be adopted as soon as possible.
11. Finally, charting a new course for curricula requires energetic, flexible staff. Teachers reluctant to adopt current practices are often those who have taught at the school for over fifteen years. Attempts must be made by the administration to provide appropriate transfers or to make them aware of opportunities for professional renewal.

Dissemination

Many of the practicum strategies have already been disseminated to the staff through the interdepartmental notemaking in-service and professional day workshops where a seventy page Study Strategies Resource Manual comprised of relevant journal articles, the counselling awareness materials' interdepartmental program description, notemaking rationale, test preparation information, and other metacognitive/learning style resources were handed out. In terms of the posters, over 200 were distributed to interested special education teachers in the district. The outreach project of the practicum involved the writer presenting a district wide workshop on notemaking to over twenty-five colleagues. Also the student resource materials and staff in-service information have been requested by several teachers in elementary, E.S.L., and alternative classes. The writer is very gratified to have recently received a letter from the District Principal of Special Education acknowledging this dissemination. The writer plans to continue being an advocate for the importance of teaching notemaking skills and will be willing to provide materials and present workshops at the district and provincial levels. The Home Study Guide designed by the writer will be available next year to counsellors and teachers as a resource for

parents. Copies of the practicum project will be placed in the school's and district's professional libraries.

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APPENDIX A

Results of Study Skills Assessment 1: Teacher Questionnaire

Please do not put your name on this paper.

STUDY SKILLS ASSESSMENT 1

TEACHER QUESTIONNAIRE

A collaborative effort by several departments is being launched to assist students to learn more effectively throughout the grade 8/9 curriculum. Research suggests that often this student population has little understanding of various study skill strategies to help them organize and retain content information. Our program will focus upon developing learning concepts and procedures deemed useful by all the departments involved.

The first procedure is to determine the role notetaking and other study skills presently play in your program. Please take the time to assist us in gaining much needed background information necessary in implementing this interdepartmental project. Your answers will be kept in confidence. Thank you for your support.

A. Check the study skills training in which students need instruction.

		Yes	No
a)	Methods of developing improved study habits	19	6
b)	Time management: assessments of study skills	20	5
c)	Strategies for developing good organizational skills	16	9
d)	Notetaking: Summaries, outlines, main ideas	18	7
e)	Test preparation & test taking strategies: kinds of exams	19	6
f)	Efficient text reading: previewing, skimming/scanning	17	8
g)	Research skills: essay writing	16	9

B. Check the study skill components you feel should be implemented in this interdepartmental project.

		Yes	No
a)	Grade 8/9 guidance classes which emphasize the characteristics of good study habits: Assessment of study skills	17	8
b)	The development of a student study skills handbook: A resource book outlining helpful hints to academic success.	20	5

	Yes	No
c) Two professional days to focus upon Study Skills: Speakers/ workshops, Interdepartment meetings.	17	8
d) A specific program for disorganized students in the Skills Development Centre to upgrade basic study habits.	15	10
e) The development of a Parent Handbook Of Tips To Help Their Child Learn: Parents' guide to be distributed during P.T. conferences and possible evening inservice.	19	6
f) Classroom demonstrations of various notetaking strategies to improve organization and retention of content material.	20	5
Please suggest number of sessions.	Average 4 sessions	
g) A specific program for Grade 8/9 students on How To Prepare And Take Exams.	19	6
h) A selected literature review of study skill strategies could be circulated to staff members.	16	9
i) A study skills policy should be developed for the school	13	12

C. Check the notetaking concepts you are interested in utilizing in your class:

	Yes	No
a) Two/three/four column notetaking: effective for science, socials, language arts.	20	5
b) Power writing: process to differentiate between main ideas and details.	15	10
c) Problem-solution guide: thinking/writing structure for analyzing short stories/current events.	16	9

	Yes	No
d) Opinion-Proof formats: model useful for organizing supportive arguments with evidence.	19	6
e) Spool System Diagram: a system for organizing paragraphs through definite structure of thesis, supporting and concluding paragraphs.	18	7
f) Word chart format: helps organize concepts into categories, hierarchies to establish relationships among ideas.	17	8
g) Conceptual mapping: a technique to instill comprehension and organization into pictoral form.	21	4
h) Cornell notetaking: assists students to develop active listening during a lecture.	19	6

D. For each statement below, indicate the extent that you agree or disagree by marking the appropriate answer.

	Often	Sometimes	Rarely
1) In my class, I encourage students to utilize their notebooks in developing basic organizational skills.	15	6	4
2) In my class, notebooks are used as an indicator of students' study habits.	10	8	6
3) In my class, notebooks contain the majority of notes, handouts and homework assignments.	14	6	4
4) In my class, disorganized Gr. 8/9 students often have unsatisfactory notebooks and poor study habits.	15	7	3

	Often	Sometimes	Rarely
5) In my class, Gr. 8/9 students should have the ability to identify main ideas and summarize important data.	21	2	2
6) I believe the ability to take good notes during a lecture will prove helpful in my class	14	7	4
7) In my class, students would benefit from training in effective underlining, summarizing and other highlighting techniques which have proven useful in the retention of textbook information.	16	3	6
8) In my class, a series of posters displaying various notetaking formats would prove effective in strengthening grade 8/9 students' textbook reading skills.	14	5	6
9) Throughout the year I teach various strategies useful in preparing and taking tests.	10	4	11
10) In my class, study skills associated with habits of concentration are discussed.	5	4	9
11) I constantly try to use charts, diagrams and tables to organize information and for grading assignments.	6	7	12
12) In my class, I encourage students the freedom to develop their own systems of organizing information.	19	4	2
13) In my class, different study tips would not help students increase learning.	18	7	0

In taking the time to complete this questionnaire you have assisted in developing a more effective study skills program.

Thanks for your support.
G. Turner Rm. 105

APPENDIX B

Results of Study Skills Assessment 2: Student Questionnaire

STUDY SKILLS ASSESSMENT 2

STUDENT QUESTIONNAIRE

In order to understand student study habits, I am requesting your cooperation in completing these questions. On the next few pages you will find a study habits check list. Read each question and then answer by putting a check in the appropriate box. This information is confidential.

Planning, Organizing and Setting	**Often**	**Sometimes**	**Rarely**
1) I study at home in a regular place away from disturbances like T.V.	8	12	10
2) I have a system of keeping track of homework and use it each school day.	10	14	6
3) I often feel rushed when completing homework.	23	7	0
4) I follow an evening study routine in order to complete assignments.	14	12	4
5) I often reward myself after completing homework I set out to do.	9	9	12
6) My teachers check my locker for basic order and to see a system of filing books neatly.	0	9	21
7) My locker has a schedule which I use to put in homework assignments for the week.	8	6	16
8) Do you study by yourself or around others.	11	8	11
9) My parents make me most of the time do homework each night before T.V.	8	13	9
10) My parents know what assignments I work on and give suggestions.	4	9	17
11) My parents never ask or are interested in my activities at school.	15	9	6

	Often	Sometimes	Rarely
12) In counselling or guidance classes we talk about study habits.	2	10	18

Reading and Notemaking

13) I have been taught how to outline, summarize and find main ideas from my readings in classes this year.	6	8	18
14) I find it easy answering questions from the text in English, science and socials.	17	9	5
15) I always look for main ideas and then subordinate details when I read a text.	3	8	19
16) I know how to take lecture notes and critique films into short statements.	0	14	16
17) Before reading a chapter I make notes of main headings in the text.	3	8	19
18) Do you have problems shortening ideas from the text?	6	6	18
19) When studying I use my notebook to review.	2	9	19
20) Since leaving elementary school I have been taught how to write 2/3 column notes.	10	8	12
21) My teacher encourages us to use different methods to revise, highlight and summarize material.	6	6	18
22) My teacher uses outlines and charts to explain ideas.	3	4	23
23) We often take notes during films and hand them in to be marked.	1	9	20
24) My notebook is neat and well organized.	9	16	5

	Often	Sometimes	Rarely
25) Often my parents check over my notebooks and tell me what to improve.	3	10	17
26) Our teacher regularly collects notebooks.	4	12	14
27) My notebook is just as helpful as my text.	11	8	11

Examinations

28) I review the whole exam before starting.	14	6	10
29) During a test, I do check the time remaining.	14	8	8
30) I often misread sections on exams.	12	9	9
31) I feel rushed to complete the whole quiz at times.	20	6	4
32) I often check over the test after completing it.	7	18	5
33) Teachers have told me helpful hints to prepare for a test.	9	3	18
34) I know how to do several types of tests and have been taught different methods this year.	6	6	18
35) I know different ways to remember facts and have been taught these helpful things this year.	5	5	20
36) I use cram sheets or cards to summarize facts before an exam.	10	2	18

Check any of these study skills you feel would be of help in making you a better student.

		Yes	No
37)	How to prepare for exams, helpful hints to remember facts.	22	8
38)	Ways to improve concentration.	24	6
39)	How to improve and organize homework/notebooks.	18	12
40)	Methods to find details/main ideas in your textbook.	17	13
41)	How to organize your study schedule.	14	6
42)	Helpful information about different types of tests and how to take them.	20	10
43)	New ways to organize and retain information in your notebook.	26	4
44)	A small student book outlining tricks to make studying easier.	25	5

APPENDIX C

Learning Strategies Workshop Survey

LEARNING STRATEGIES WORKSHOP

Teacher Attitude Survey

Please take a few minutes to complete this evaluation and turn it in to the Professional Day organizer before leaving today.

AA	-	Strongly Agree
a	-	Tend to Agree
?	-	Undecided
d	-	Disagree
DD	-	Strongly Disagree

1.	The professional day overall held interest for me.	AA	a	?	d	DD
2.	The presenters were well-prepared.	AA	a	?	d	DD
3.	The materials handed out were organized and relevant.	AA	a	?	d	DD
4.	My awareness of providing students with a repertoire of learning skills has been increased.	AA	a	?	d	DD
5.	I support the teaching of basic notemaking strategies to help students organize their reading.	AA	a	?	d	DD
6.	I plan to implement study skill conceptsin my classroom.	AA	a	?	d	DD
7.	My completion of the Learning Profile increased my awareness of varied learning styles in the classroom.	AA	a	?	d	DD
8.	I was given time to study the materials and to discuss them with other staff members.	AA	a	?	d	DD
9.	The professional day improved my understanding of the importance of an inter-departmental study skills program at grade 8/9.	AA	a	?	d	DD
10.	I would be interested in inservice common study skills relevant across the curriculum.	AA	a	?	d	DD

APPENDIX D

Attitudinal Survey of Interdepartmental Team Process and Notetaking Program

STAFF SURVEY ON COLLABORATIVE APPROACH TO TEACHING/LEARNING

This year the focus of professional development has been the development of a collaborative team approach to instructional improvement (eg. learning style, study strategies, notemaking skills, information processing, and other common curriculum concepts. I am interested in determining the actual or potential benefits you see deriving from your association with a collaborative or team approach to learning.

PART I

Please state both positive outcomes and concerns or issues associated with a collaborative approach to teaching/learning.

Positive: _____

_____

_____

Concerns/Issues: _____

_____

_____

PART II

Y = Yes N = No

I have, during this year, gained a better understanding of study strategies through the class activities presented.	Y	N
I have, during this year, developed an awareness for encouraging notemaking strategies like spooling, webbing and outlining concepts into my classes.	Y	N
I have, during this year, gained an increased understanding associated with notemaking and its use of varied graphic structure to improve reading.	Y	N
Do I feel it's important to provide notemaking experiences in grade 8/9 content classes?	Y	N

Thank you for your time in completing this survey.

APPENDIX E

Sample of Grade 8/9 Learning Styles Awareness and Notetaking In-service Program Questionnaires

Student Learning Strategies Survey

Please assist us in completing this questionnaire. Your responses will provide valuable insights about the various learning approaches used in reading, writing, and studying. Thank you for your cooperation.

Section A: Knowing Some Good Habits

Below are some personal statements about studying. Indicate which are true by circling true, and which are false by circling false.

1. My concentration is such that I can study no matter where I am and am not affected by sights or sounds around me.	T	F
2. It seems to me that a study schedule or an assignment book is a waste of time in organizing a weekly study plan.	T	F
3. I believe underlining key words or phrases while reading helps you remember important ideas.	T	F
4. It only confuses you if, when learning something new, you try to compare it with something you already know.	T	F
5. I believe students are more likely to remember ideas when studying, if they write them down, say them out loud, or get involved in creating mental pictures of them.	T	F
6. It seems to me that you are more apt to remember information if you study over several days rather than in one crash session.	T	F
7. Learning to locate main ideas and details in a paragraph helps the reader organize information from the text.	T	F
8. Usually, I just read without thinking. Picking out main ideas and details will not help you understand the text better.	T	F
9. I find using spacing and underlining in my notebook helps to emphasize important points.	T	F
10. To improve my memory I sometimes find a hook word central to an idea to help me remember the concept.	T	F
11. Restating information into your own words is the best way to learn.	T	F
12. Making up questions about what you are studying helps you become more actively involved and interested.	T	F
13. In studying for exams, it seems to me that reviewing your notes to pick out specific details is a waste of time.	T	F
14. I think study strategies are methods or ways of doing something that can make learning easier for you.	T	F
15. For an essay exam, I think it is very important to make an outline for each question before you begin to write.	T	F

APPENDIX F

Parent Opinion Survey of the Home Study Guide

PARENT OPINION SURVEY OF THE HOME STUDY GUIDE

The purpose of this survey is to gather feedback on the value of providing parents during a school conference with a Home Study Guide. The handbook presents helpful hints in encouraging a better understanding of effective home learning. Hopefully, parents and students will through talking about the guide's contents become knowledgeable about a variety of important learning concepts. We would appreciate you taking a moment to evaluate its content, format, and usefulness.

Read each statement, then circle the symbol that best represents your reaction to the statement according to the following scale:

AA	-	Strongly agree
a	-	Tend to agree
?	-	Undecided
d	-	Tend to disagree
DD	-	Strongly disagree

1. The contents of the guide presents interesting and varied study skill concepts.

AA a ? d DD

2. The design of the book presents information in a clear and organized manner.

AA a ? d DD

3. The Home Guide would be a helpful resource for parents with children experiencing academic difficulties.

AA a ? d DD

4. The handbook should be made available during parent/teacher interviews.

AA a ? d DD

5. Overall, this Home Guide is useful in providing an opportunity for parent and student to begin discussing how to improve homework strategies.

AA a ? d DD

Rationale Underlying the Resource Book

One of the major concepts implemented when presenting important information to staff/students was the writer's sensitivity to text structure. Although much of the knowledge related to the practicum's mandate for upgrading study skills is not new, the visual and graphic structures approach is. Much of the "Learning How To Learn" instruction modelled schematic organizing concepts. From micro problem-solution charts to a variety of mapping techniques, the writer attempted to convey the effectiveness of teaching or learning metacognitive notemaking methods universally applicable across the curriculum.

APPENDIX G

Grade 8/9 Study Strategies Resource Manual

GRADE 8/9 STUDY

STRATEGIES RESOURCE MANUAL

LET'S FOCUS ON LEARNING

APPENDIX G

The Sullivan Royal Commission Report suggests that social and academic changes have created new demands upon our schools to focus upon processing skills.

1. Social Changes

- Explosion in knowledge requires the teaching of information processing skills.
- An increasing variety of ethnic backgrounds has broadened the already heterogenous groupings in schools.
- An emphasis on the "mainstreaming" of students with special needs.
- An increase in single parent families.
- An increase in child abuse, drug abuse, and gang related crimes

2. Academic Changes

- An emphasis on developmentally appropriate practices at all levels of school.
- Implementation of continuous progress philosophy and practice at the elementary level (eg. ungraded or multiaged classes).
- Focus on co-operative learning strategies and team teaching.
- An emphasis on processes, skills, and attitudes necessary for learning across the curriculum.
- Recognition of the need for more varied and relevant evaluation strategies and instruments.
- An increased understanding of the nature of learning.

Broad Curriculum Reforms Proposed for Secondary Schools

New Learning Strategies

- An emphasis on students acquiring critical thinking skills
- An emphasis on process, how we learn, universal to all
- An increase in active learning, problem solving, trial error experiences

New Assessment Perspectives

- Shift from subject centred to student centred
- Procedures learning rate/style friendly
- Recognition of need for more varied and relevant evaluation practices (drop out rate)

A New Common Curriculum

- Supportive of a holistic learning perspective which increases skill ccherence
- Focus upon employing a cooperative team approach in modifying/enabling learners
- Modifying of curricula structure to initiate a more flexible system to group students
- Restructuring of disciplines to encourage interdisciplinarity – shared teaching/learning concepts
- Concerned with fragmentation of curriculum into isolated disciplines

Creating A Climate For Change

Concern	Solution
Instructional Clarity • Unclear concepts – heightened teacher anxiety • Lack of understanding – resistance/reluctance to implement	**Clarifying/Facilitating The Acquisition Of Data** • Clarify concerns • Provide personal information • Provide information • Reinforce opportunities • Advocate new learning • Promote learning style awareness strategies
Teacher Empowerment • Insufficient involvement planning stage – suspicious of change • Threatens longstanding procedures – critical of process skill focus – oppose team focus	**Foster An Interdisciplinary / Common Curriculum Perspective** • Create an awareness of shared concepts • Increase interest in holistic perspective • Articulate emerging problems/needs • Promote new strategies • Demonstrate techniques/materials
Organizational/Management Drawbacks • Concerns over workload/funding – impractical, non-supportive • Challenges/departs from present system – low morale, problem making, not solving	**Ensure Time And Energy For Implementation** • Increase substitute funding • Generate reform/opportunities • Initiate new procedures/self interest

The training is based on five general awareness strategies of innovation, concern, and understanding.

1. Information
2. Personal identification
3. Demonstration
4. Collaboration
5. Integration

Workshop I FOCUS

Focus Rationale Personal Interest

- Overview/rationale
- Mutual dependence perspective
- Learning style awareness
- Application relevance
- Learning strategy concepts

Workshop II FOCUS

Understanding, Demonstration, Application Relevance, Collaboration

- Reinforcement of bandwagon perspective
- Demonstration of learning strategies
- Small session experiences
- Dissemination for block meetings

Workshop III FOCUS

Explanation, Personal Identification, Demonstration, Collaboration

- Info/relevant resources
- Universally desired thinking skills
- Universally desired organizational strategies
- Mutual understanding of concepts taught
- Small group activities/demonstrations

Workshop IV FOCUS

Cooperation Action Strategies

- Networking of supportive department heads/staff
- Supportive funding for articulation, coaching, problem solving
- Collaboration with school committees
- Incentive/innovative funding

WHY A GRADE 8/9 STUDY STRATEGIES PROGRAM?

Capitalizes On Individual Difference

- An essential part of learning is self knowledge of one's learning style
- Generates self interest/renewal in knowing
- Emphasis is on process, how we learn, universal to all students
- Encourages multi-sensory learning (visual, auditory, kinesthetic)
- focus on life long learning concepts

Promotes Notemaking Structures as Cognitive Tools

- Recognizes the learner's innate qualities of structuring information and provides notetaking structures which help identify, cluster disorganized bits of information into a retrieval system.
- Utilizes a variety of mental image structures to organize info and bridge the gap between old/new ideas (Educare)
- Provides not taking tools which can be useful across the curriculum in making learning less abstract or complex
- Ideal study strategy

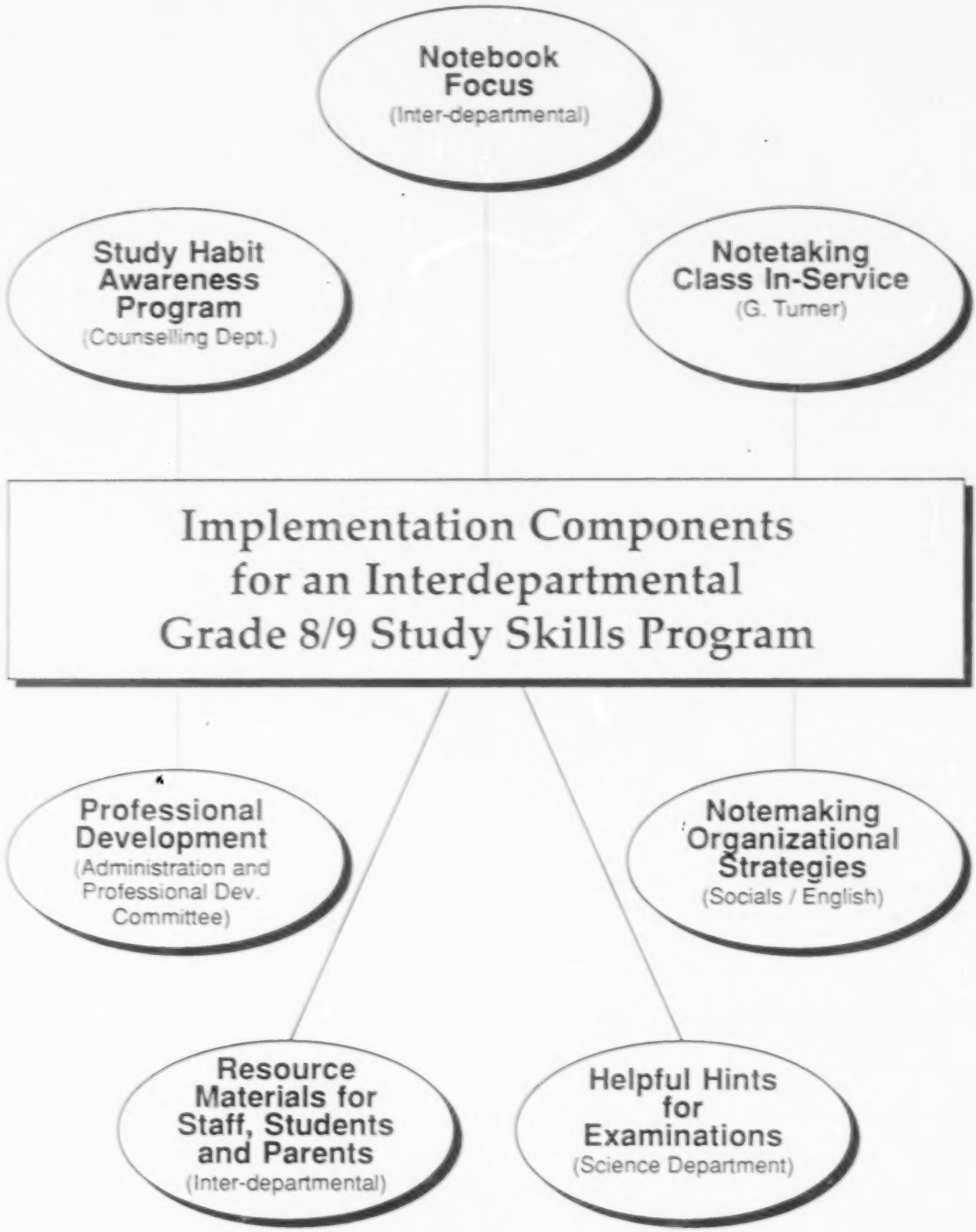
WHY A GRADE 8/9 STUDY STRATEGIES PROGRAM?

Addresses Academic/Social Needs

- Students unclear about how to learn (memorize, organize info)
- Provides essential skills to meet varied abilities
- Relevant across the curriculum
- P.D. scope & consistency
- Encourages student, parent accountability
- Simplistic, practical, efficient (broad implementation), common concerns

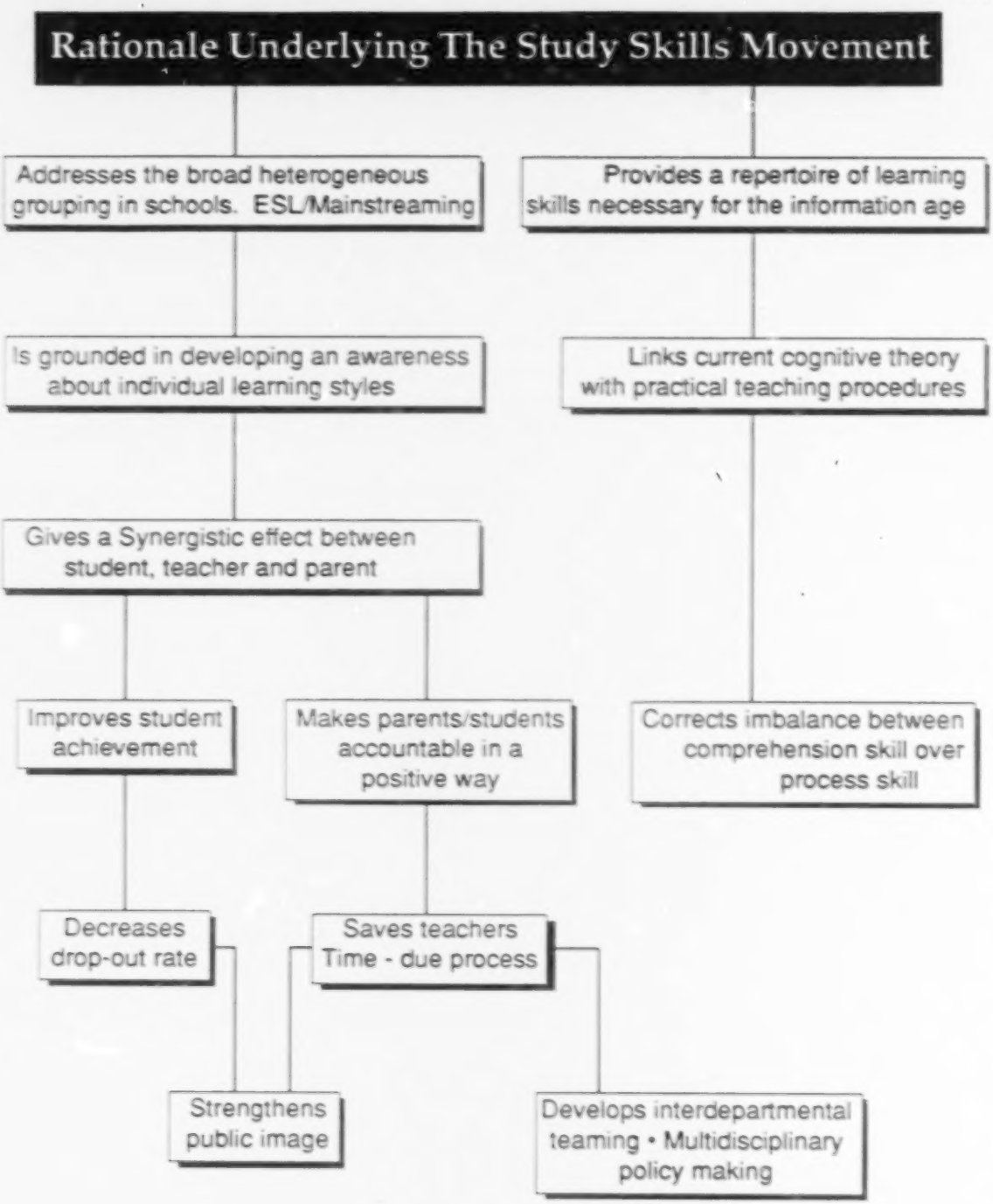
Facilitates Independent Learning

- Blue print, defines strategies, habits and skills
- Encourages a repertoire of organizational concepts
- Generates confidence through how "to do" models of success
- Emphasizes active learning

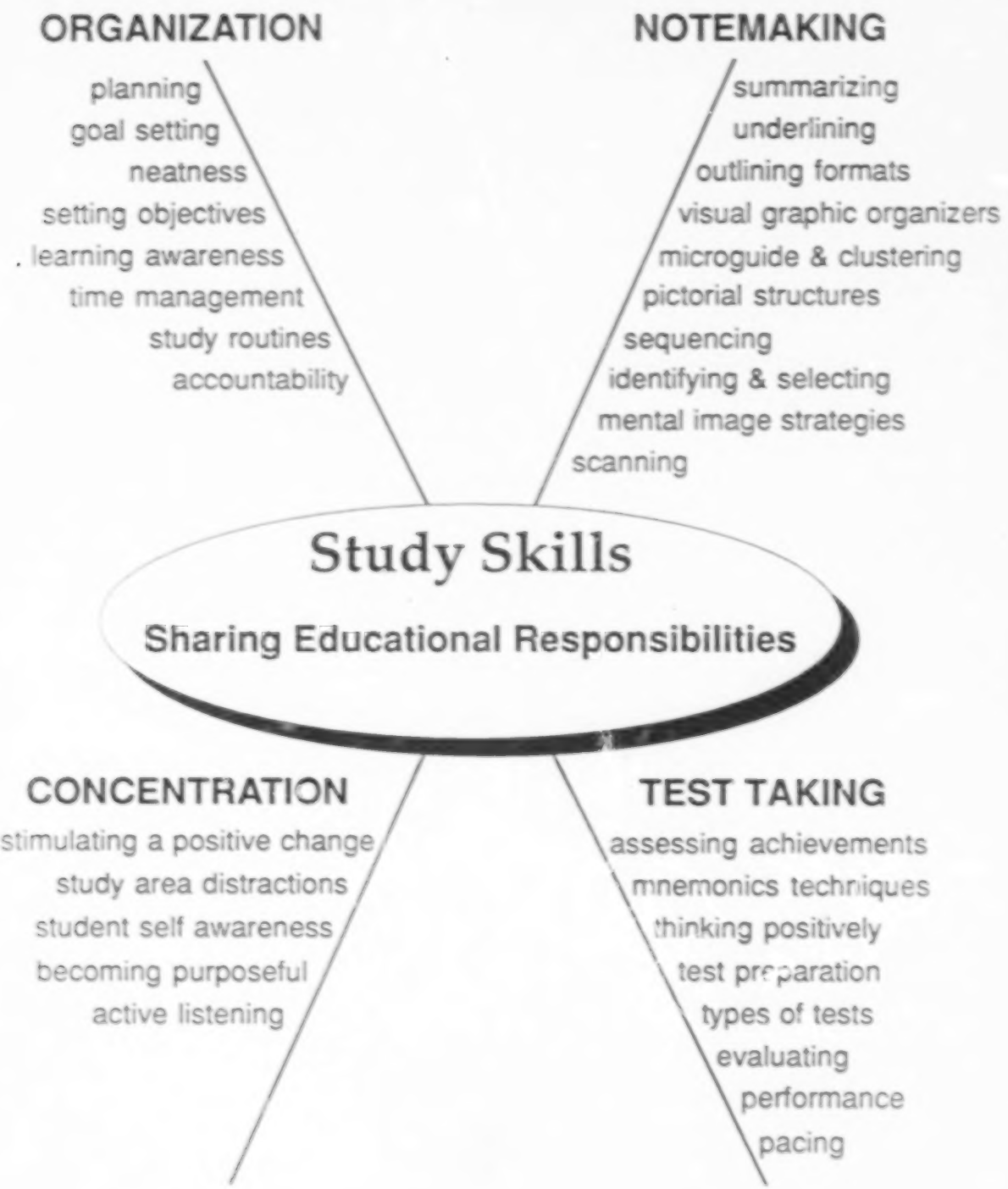

Notebook Focus
(Inter-departmental)
Study Habit Awareness Program
(Counselling Dept.)
Notetaking Class In-Service
(G. Turner)
Implementation Components for an Interdepartmental Grade 8/9 Study Skills Program
Professional Development
(Administration and Professional Dev. Committee)
Notemaking Organizational Strategies
(Socials / English)
Resource Materials for Staff, Students and Parents
(Inter-departmental)
Helpful Hints for Examinations
(Science Department)

"PROGRAM HOPEFULS"

- Provide the grade 8/9 students with some study habit awareness.
- Reinforce in grade 8/9 students the value of utilizing a repertoire of learning strategies to make learning easier.
- Promote in grade 8/9 classes the importance of the notebook and the use of a variety of notemaking structures to process information.
- Develop and organize "learning to learn" resource materials for students, teachers and parents.
- Foster in staff a commitment to and enthusiasm for developing critical learning strategies needed for students in organizing information at the grade 8/9 level.


Rationale Underlying The Study Skills Movement
Addresses the broad heterogeneous grouping in schools. ESL/Mainstreaming
Provides a repertoire of learning skills necessary for the information age
Is grounded in developing an awareness about individual learning styles
Links current cognitive theory with practical teaching procedures
Gives a Synergistic effect between student, teacher and parent
Improves student achievement
Makes parents/students accountable in a positive way
Corrects imbalance between comprehension skill over process skill
Decreases drop-out rate
Saves teachers Time - due process
Strengthens public image
Develops interdepartmental teaming • Multidisciplinary policy making

Tools for Learning



Study Skills:
Various Theoretical Definitions

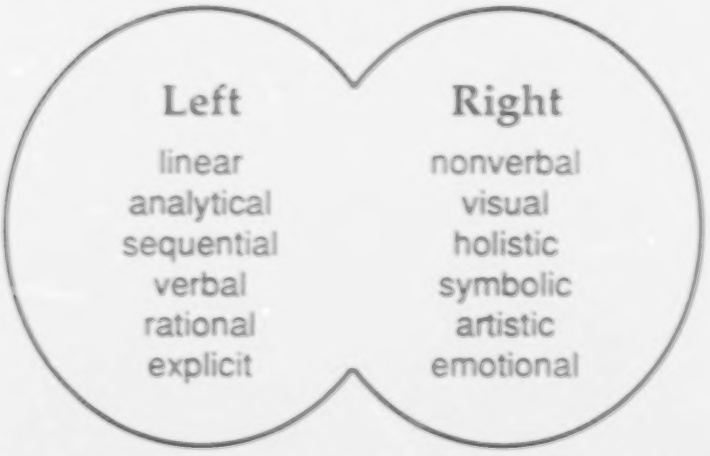
- Functional skills necessary for **life-long learning**
- Learner-selected objectives, strategies and **habits that facilitate independent learning**
- Those **skills associated with** acquiring, recording, organizing, synthesizing, remembering and **using information** in school.
- Any instruction which puts a **greater emphasis** upon strategies needed in p**rocessing information rather** than basic **comprehension understanding**.
- Study Skills are those determined purposes, practices and **habits** that a **person uses to learn**.
- Those **cognitive tools** needed for acquiring knowledge and are an integral part **of the total reading process**.

Marshak 1979

Visualized Notemaking Left-Right Brain Theory

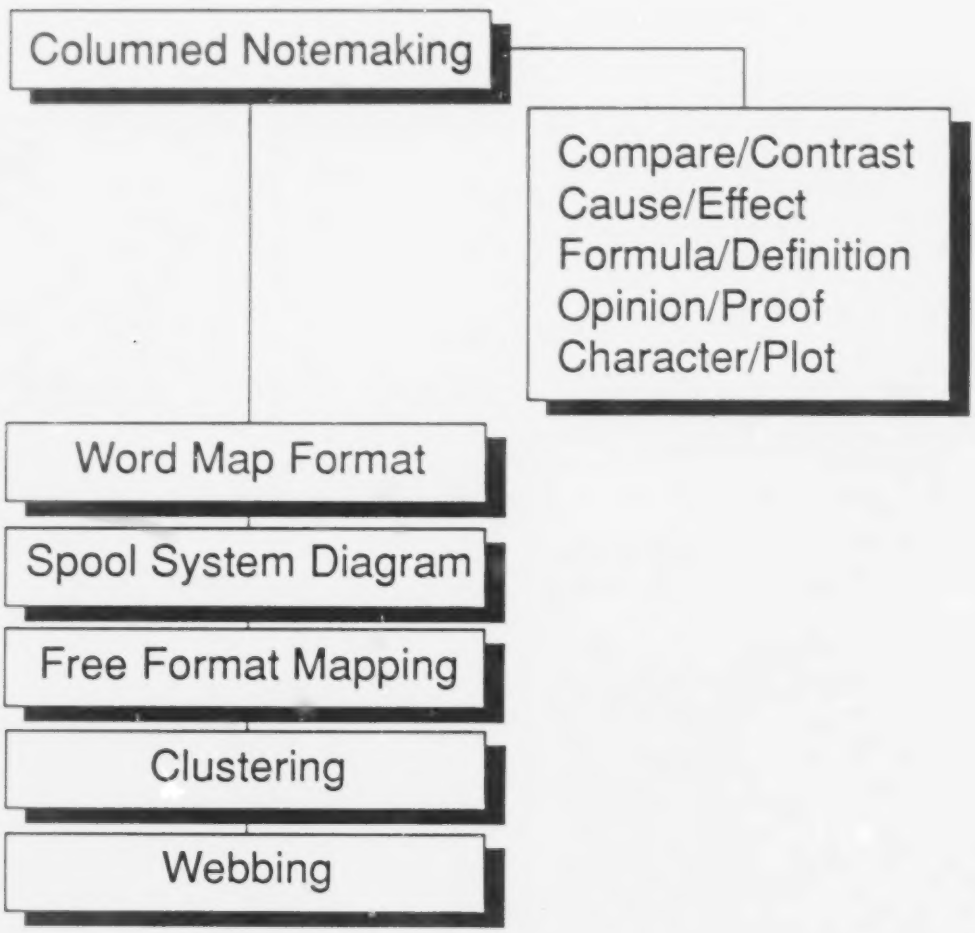
- Visualized notemaking is a practical and easy way to use both halves of the brain. Verbal and visual cues call the entire brain to action.
- Left brain skills are most taught and rewarded in schools.
- Double channel banking improves student memory.
- Visual and verbal thought integration enables a student to use thinking strengths from both brain areas.

The brains' halves have different skills or ways of thinking that can be combined by use of visual notemaking



Visual notemaking unlocks the brain's hidden powers

Other Structured Notemaking Concepts



Three Characteristics of Intelligence Emerge During Adolescence

1. Hypothetical - Deductive Reasoning

- the ability to think about possibilities
- the ability to move easily from the general to the specific
- the ability to take the perspective of others
- the ability to anticipate outcomes
- the ability to see discrepancy between how things are and how they might be

2. Emergence of Scientific Reasoning

- the ability to formulate hypotheses
- the ability to arrive at generalizations
- increased ability to "if - then" propositions
- increased ability to systematically test hypotheses

3. Development of Second-Order Thinking

- the ability to think in abstract concepts such as faith, friendship, honesty or fairness
- the increased powers of introspection
  - overly concerned with self awareness
  - egocentric behavior
  - surrendering to peer pressure
  - short-lived intense interpersonal relationships
  - idealistic, and impractical thinking

Skolnick 1986

Why Take Notes?

1. Research indicates that effective notemaking is the most useful learning strategy students can be taught.

2. The ability to take good notes will prove helpful in the following areas of school.

1. Building organizational skills
2. Establishing active thinking concepts
3. Improving concentration
4. Developing effective reading habits
5. Processing main idea/detail
6. Preparing for tests
7. Designing new memory techniques

Schematic Theory Advances Notemaking Research

Piaget (1952)

- Described "Schemata" as mental models or files of images which integrated new information.
- Framework for classification of concepts.
- Cognitive skeletal framers for holding memories/rules.

Schematic Theory Advances Notemaking Research

Ausubel (1963)

- "Subsumption Theory" stressed the assimilation of smaller bits of information into larger.
- Renewed interest in structuring information and need for advanced textual organizers.
- Stressed that concepts be taught from general to specific.
- Primary function of advanced organizer was to bridge the gap between old and new information for the learner.

Schematic Theory Advances Notemaking Research

Bruner (1960)

- Stressed conceptual thinking or "envisioning."
- Key to learning and memory was constructing visual displays of relationships mentally.
- Emphasized importance of "connective links" between and among bits of information.

Significant Findings of Reading Research Related to Notetaking (1950-1978)

- Notetaking encouraged the learner to actively code, interpret, and synthesize information.
  (Di Vesta & Grey, 1972; McClendon, 1958)

- Notetaking had value in providing the learner with an advanced purpose/procedure to guide the organization of ideas from the expository text.
  (Bruner, 1960; Fisher & Harris, 1973; Hanf, 1970; Thorndyke, 1977)

- Notes provided the learner with a concrete frame of reference and an external memory device for later study.
  (Mandler, 1978; Miller, 1960)

Significant Findings of Reading Research Related to Notetaking (1950-1978)

- Underlying, outlining. or summarizing information enhanced reading recall.
  (Johnson, 1973; Palmatier, 1971; Rhode, 1950)

- Paraphrasing information helped to personalize a student's notetaking style and resulted in the processing of information at a deeper semantic level.
  (Cartier & Titus, 1970; Dyer & Silver, 1975; Johnson, 1973; Wiener, 1973)

- The act of notetaking went beyond mere rote learning to a "sifting out" process which enhanced comprehension.
  (Kintsch & Van Dyck, 1975; Palmatier, 1971)

Some Thoughts on Notemaking

- No single notemaking method is more effective than another.
- Variables such as learning style, age group, reading level, or suitability for task may influence student choice of note-making strategy.
- Graphic notemaking approaches (e.g. clusters, webs, semantic organizers, cognitive maps) can assist students with reading difficulties to visualize important ideas or concepts.
- Varied notemaking techniques should be taught and modelled by teachers in all curriculum areas.
- Using a variety of notemaking strategies enables the learner to record information that is viewed, heard, or read in a more meaningful and personalized manner.

I. Facts About Notemaking

A. Students need to know how to organize data
B. Teachers assume it is a prerequisite skill
C. Provides a degree of original thinking
D. Clear indicator of skill level; motivation, and student accountability
E. Must be integrated school-wide

II. Study Skills Taught in Notemaking

A. Motivation/Student Accountability
B. Organization/Setting Priorities and Goals
C. Handwriting/Neatness
D. Vocabulary/Spelling
E. Active Listening
F. Characteristic of Effective Learning

- focusing on key concepts
- visualizing relationships
- sequencing
- personalizing information
- integrating/assimilating knowledge

ORGANIZATIONAL STRATEGIES

READING GUIDES/NOTETAKING STRUCTURES

The following systems of organizing information are popular notetaking procedures which can assist students to structure, assimilate, and retrieve data:

Underlining	Selectively highlighting main idea /subordinate details from textual readings.
Power Thinking	Differentiating main idea from details in readings.
Outlining	Organizing main ideas into topic headings with supporting details structured into traditional outline formats.
Summarizing Paragraph	Personalizing the learning of key ideas from readings by composing a short, well-written paragraph.
Micro Learning Charts	Promoting use of two column notes to record main ideas/details into left/right columns.
Mapping	A new concept based on schematic theory where graphic pictures assist students to visualize a concept and actively construct 'big picture' ideas. Use of webs, clusters, and diagrams are an effective pictorial way to organize information.

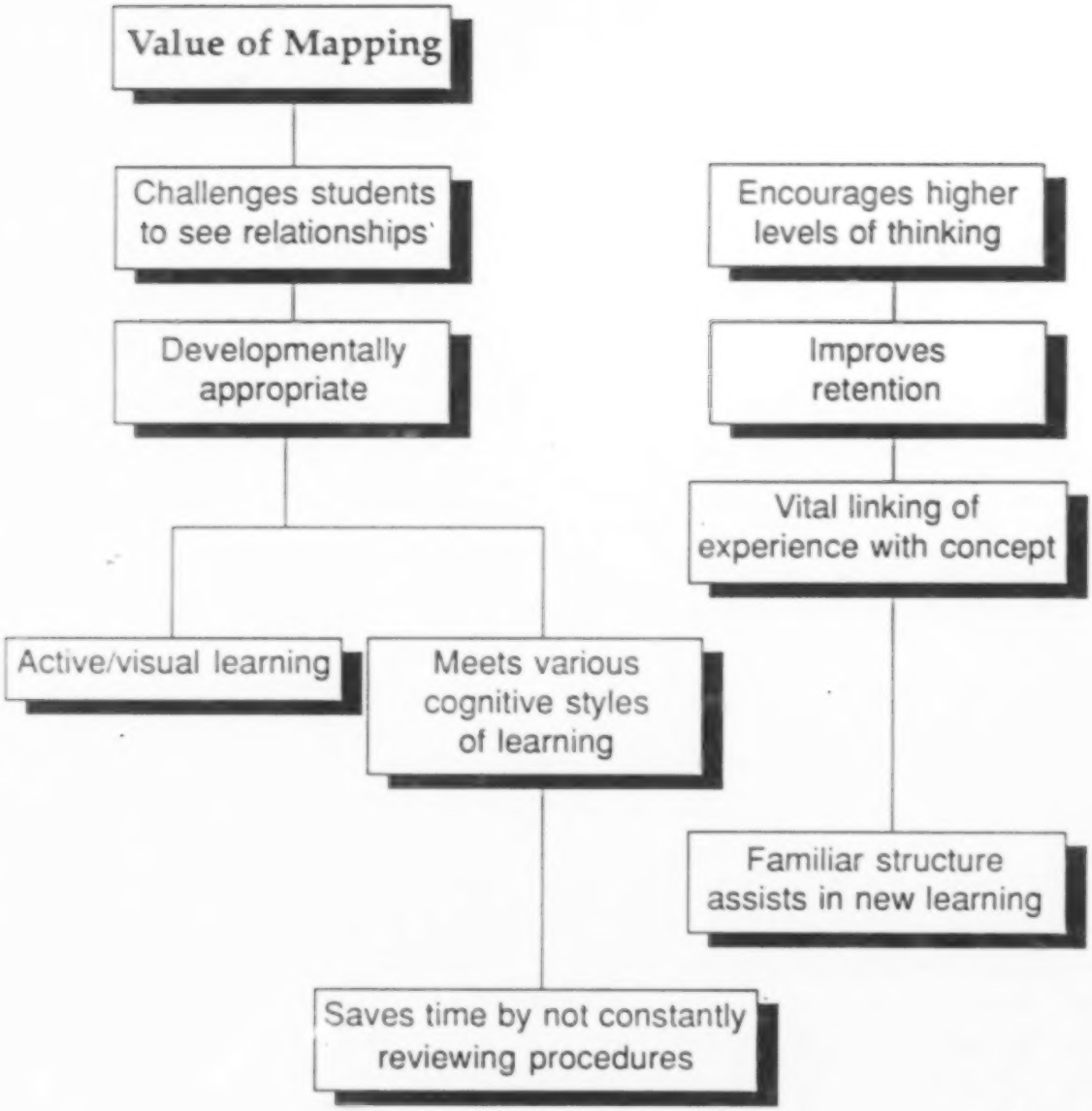
Notemaking Formats

A. Outlining: Main Idea/Detail

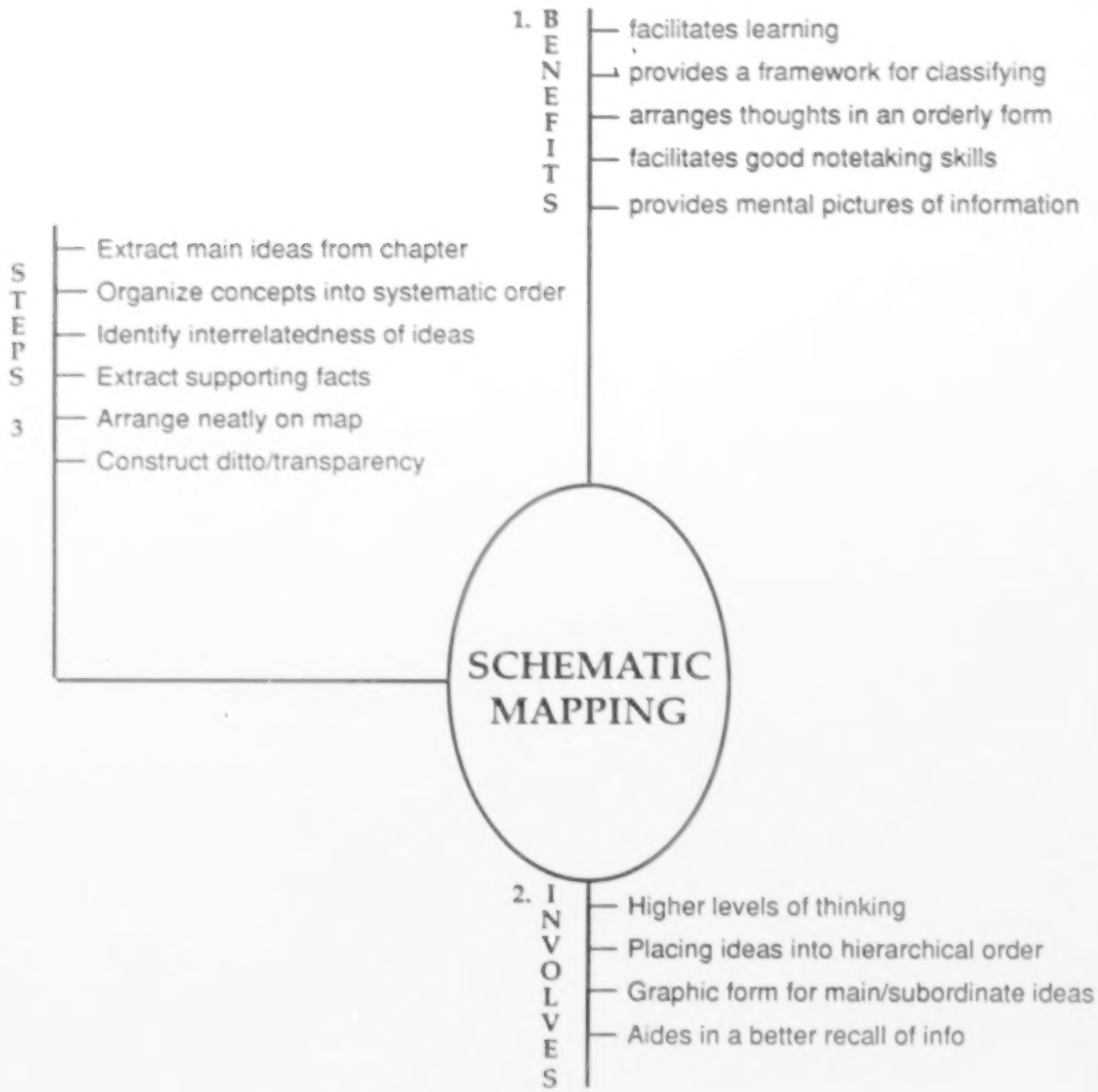
1. The traditional approach to main idea organizing
2. Easiest study tool in notemaking
3. Increases retrieval of information from reading
4. Prepares students for examinations
5. Types
   - Power Thinking
   - Surveying
   - Column Notemaking

B. Mapping: Pictorial Approach to Outlining

1. It is visually clear
2. Encourages creativity and/or originality
3. Draws connections between larger/smaller ideas and provides an overview
4. Alternative teaching approach
5. Types
   - Spider maps
   - Free Form
   - Herring Bone


Value of Mapping
Challenges students to see relationships
Developmentally appropriate
Active/visual learning
Meets various cognitive styles of learning
Saves time by not constantly reviewing procedures
Encourages higher levels of thinking
Improves retention
Vital linking of experience with concept
Familiar structure assists in new learning

Schematic Mapping
A Graphic Strategy for Understanding Concepts



IMPROVING YOUR ABILITY TO CONCENTRATE

Set The Stage

- Choose your study headquarters
- Away from noise
- Study in 30 min. intervals
- Be mentally alert
- Believe in yourself
- Maintain sufficient rest

Have A Purpose

- Put your studies first
- Create a mental picture of what you want to remember
- Set a study goal or plan
- Be positive

NOTHING SUCCEEDS LIKE SUCCESS

Identify The Content

- Look for key terms
- Focus on main ideas
- Streamline your notes
- Make outlines

Review

- Go over textbook organization patterns
- Recite aloud main points
- Reflect on their meaning
- Create an overview of all the information
- Relate parts to the overall picture
- Trace development of ideas
- Compare/contrast ideas

KICK THE YEAR OFF RIGHT

Being Organized Is Important to Learning

1. Organize Yourself

- Purchase necessary binders and other school materials
- Organize locker and notebooks
- Post timetable and weekly assignment calendar in locker
- Be prepared for class
- Keep handwriting legible

2. Set Routines

- Keep up to date on weekly assignment calendar
- Plan regular homework times nightly
- Develop neat and organized notes
- Keep in mind the main ideas and headings in text
- Meet homework deadlines

3. Be Active and Positive

- Accept responsibility for reading
- Take an interest in learning
- Listen actively and concentrate
- Get involved in a club or team
- Be punctual, attend all classes

WHAT'S THE RIGHT WAY TO STUDY?

Choose a Quiet Place to Work

Do homework regularly in a well-lit, comfortable place — away from disturbances.

Be in an Alert Position for Studying

Work sitting at the same desk every day where your study materials are close at hand.

Active Learning Is Done in Chunks

Form a habit of actively concentrating for 30 to 45 minutes before taking a break.

Avoid Frequent Interruptions

Focus your concentration by setting goals for each study session, ignoring noise around you.

Set up a Weekly Study Schedule

Record daily homework and due dates.
Develop an ongoing plan of study and always plan ahead.

Organize Your Notebook

Notebooks help you streamline information and focus you on main idea.
Keep your notes in order, dated and well-organized.

HOW TO FAIL A COURSE

BE DISORGANIZED

- Never bring pens, pencil, notebook or text
- Always just borrow what you need from others
- Think being organized is stupid

DON'T CARE

- Often arrive late and unprepared
- Waste time in class and don't listen
- React rudely to your teacher
- Make excuses why you can't learn
- Leave the room every period

NEVER PLAN

- Pay little attention to assignment
- Leave homework to the last moment
- Never set up schedules for work and study
- Do not develop regular study time after school
- Find someone to copy work from

NOTEBOOKS ARE A NUISANCE

- Never take notes neatly or in the same book
- Make the notebook look disorganized and sloppy
- Rarely underline or focus on main ideas
- Scribble and draw needless artwork in notes
- Keep handouts and assignments in disorder and unfastened
- An "I don't care" message is reflected by lots of incomplete work in your notebook

HATE READING

- Read without thinking
- Never learn to read and record notes
- Do not take an interest in the subject
- Don't focus on content overview, main topics or headings

Homework Sheet

Student: _____

Course: _____ Month: _____

Block: _____ Teacher: _____

MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

GENERAL HINTS TO REMEMBER WHEN TAKING NOTES

Be attentive and active

- notes help you to review effectively
- marks are assigned to organized notebook
- notes force you to concentrate
- notes must be simple and easy to read
- make handwriting clear and legible

Use an organized format

- often use an outline structure — with main ideas as headings, then detail
- use spacing and underlining to emphasize important points
- date notes for correct sequencing of information
- make ***main ideas*** easily seen
- follow a consistant notemaking style

Look for key concepts

- look for key words and phrases from text
- pay attention to repeated vocabulary and definitions
- pick out main ideas — indenting detail
- use a variety of memory techniques to organize facts
- learn to look for ideas eliminating all the extra words in a text

III. Characteristics of Good Notemaking

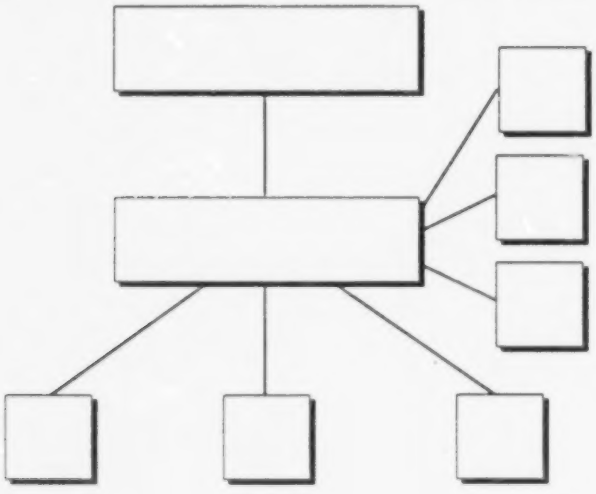
1. Main ideas are easily seen
2. Use of consistent notemaking format
3. Easy format for review and study
4. Use of starring and highlighting to indicate important ideas
5. Correct sequencing of information
6. Neat presentation
7. Dates
8. _____
9. _____
10. _____

Mapping I

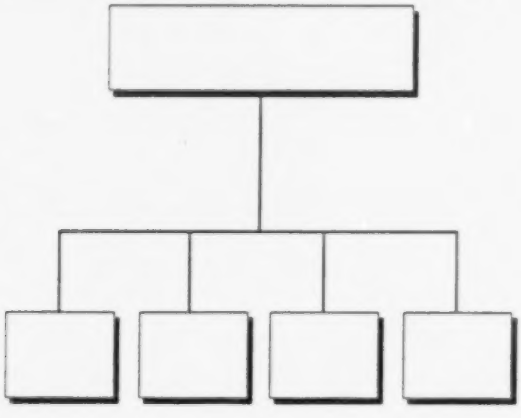
The brain is constantly filing and retrieving information resulting in a whole network of ideas/words being juggled or interlinked. Recent research tells us that the brain learns best when key concepts are interlinked where the centre has the general theme with individual ideas branching out. This mental picture which stresses a network of key words is called a **mind map**. With the map approach each idea is left open so the map grows as you read or think about a concept.

A mental picture is built up of an entire structure when key words and images are linked to each other around a main theme.

I. Build on the Hook Words *"My Hobbies"*



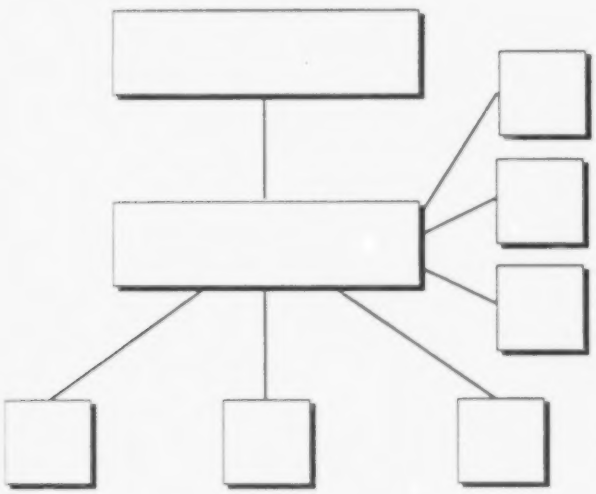
II. Build on the Hook Words *"My Future"*



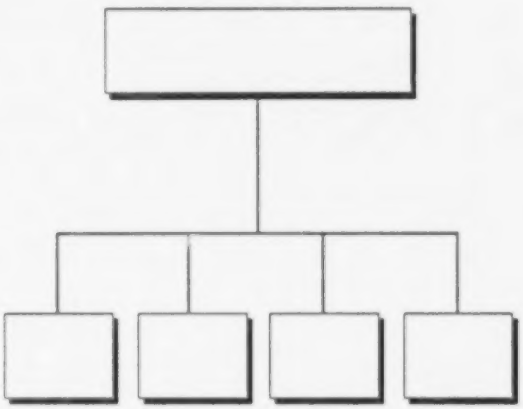
Conceptual Mapping I

Mind Maps help us see essential relationships among key concepts or ideas. This form of drawing mental pictures help us visualize and organize information into a graphic form. Here are several diagrams to spark your imagination.

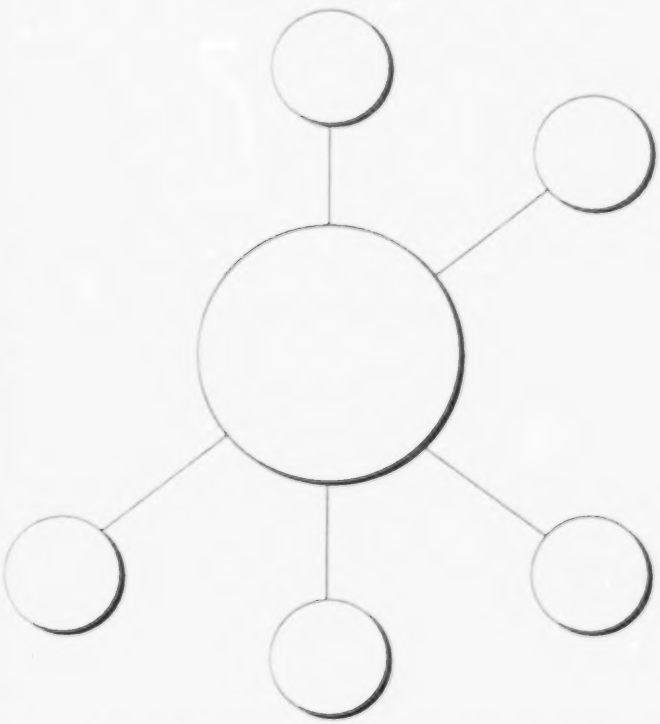
Word Map



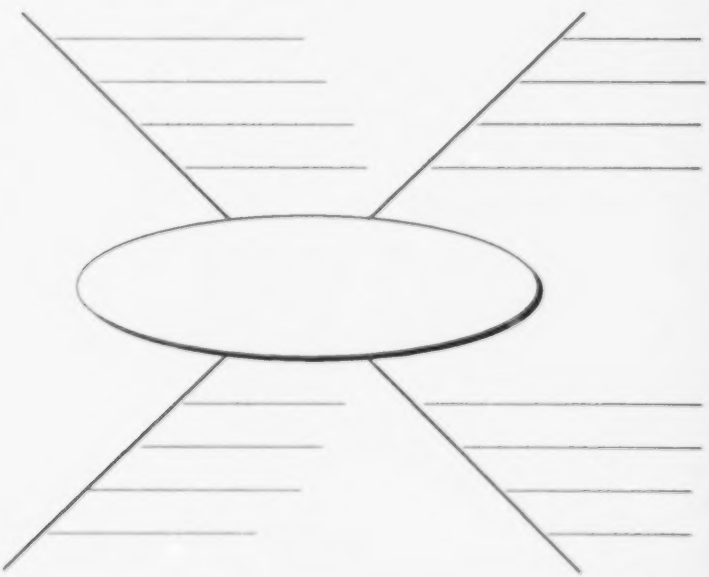
History Map



Story Map



Paragraph Map



These structures can be modified to organize your main idea and supporting detail.

Conceptual Mapping II

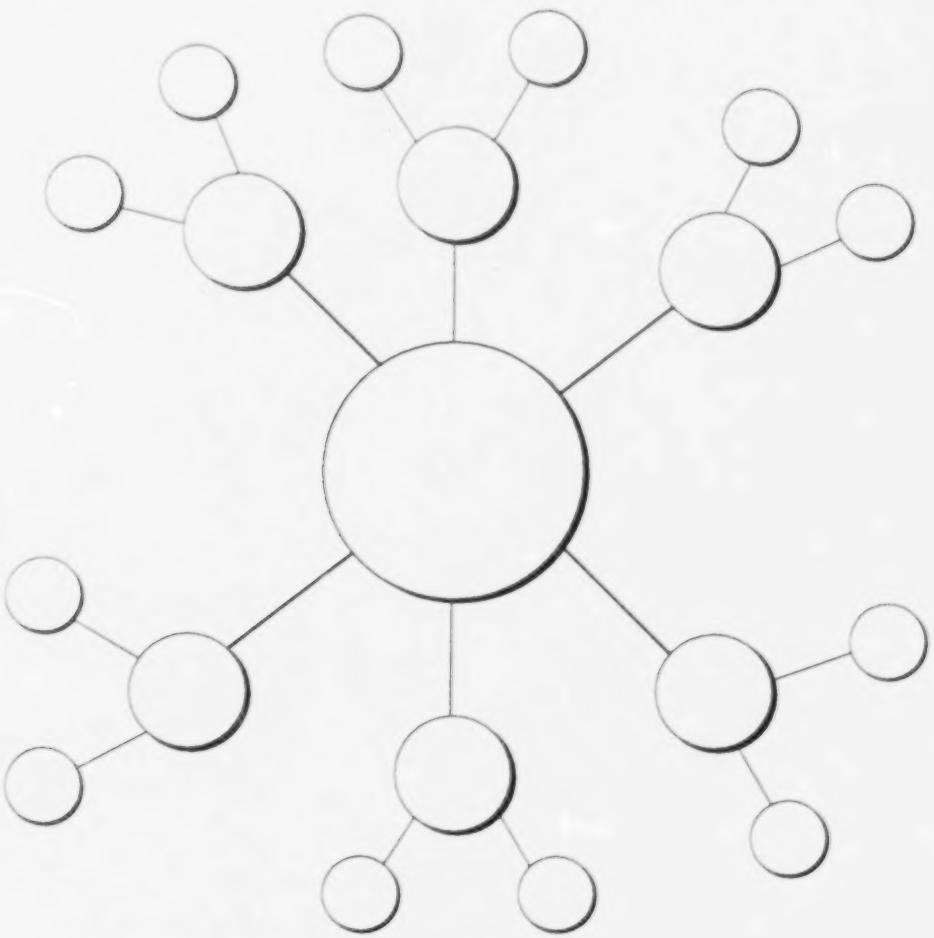
The purpose of notes is to help you learn. Mapping is an effective way to organize notes using key recall words or phrases when triggered gives you a picture or image of important ideas. Students can recall detail, events, and a range of facts just by thinking of a key word.

Memory works by association and using key sentences or words in your map is powerful in building strong links to describing a concept. Your mental picture is built on **hook words** which help the brain to remember ideas.

Mapping Steps

- Read the paragraph
- Put main idea in centre of page and circle it
- Put supporting details on lines around main idea
- Connect ideas to centre in an organized way which makes sense to you.

Make a map which tells us about you. Add supporting detail and sub detail lines.



Building Note-Making Skills
Practice Sheet

Step 1: MAIN IDEA

Step 2: MAJOR DETAILS

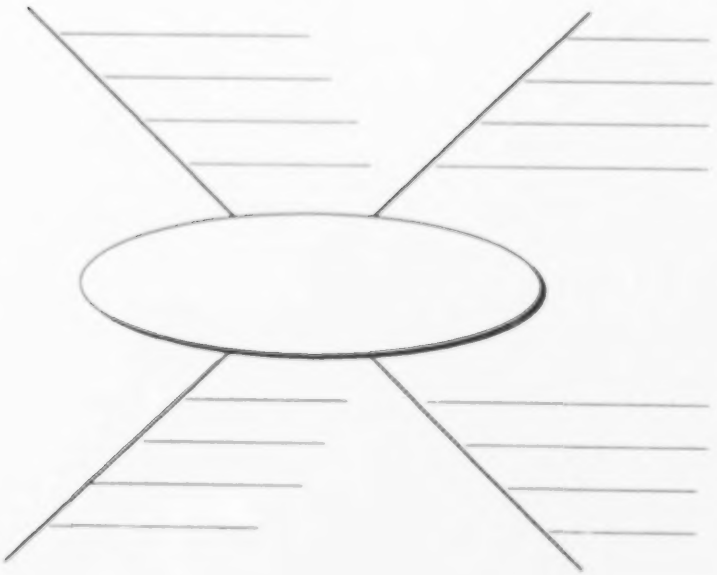
Step 3: MINOR DETAILS

Step 1: MAIN IDEA

Step 2: MAJOR DETAILS

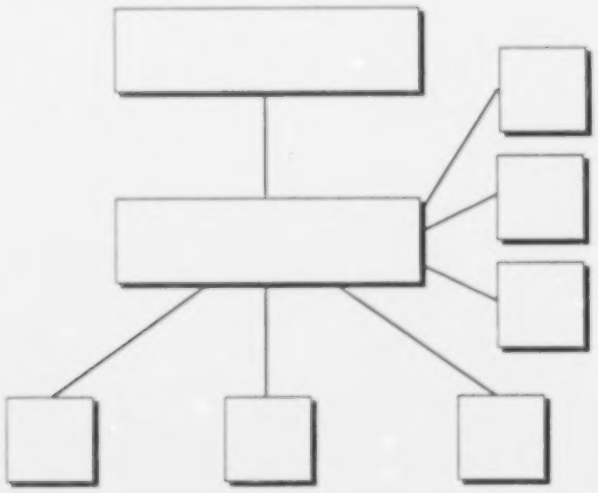
Step 3: MINOR DETAILS

(A) Mapping Structures

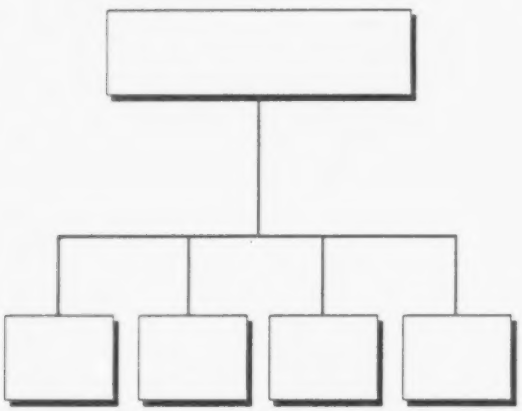


(B) Mapping Structures

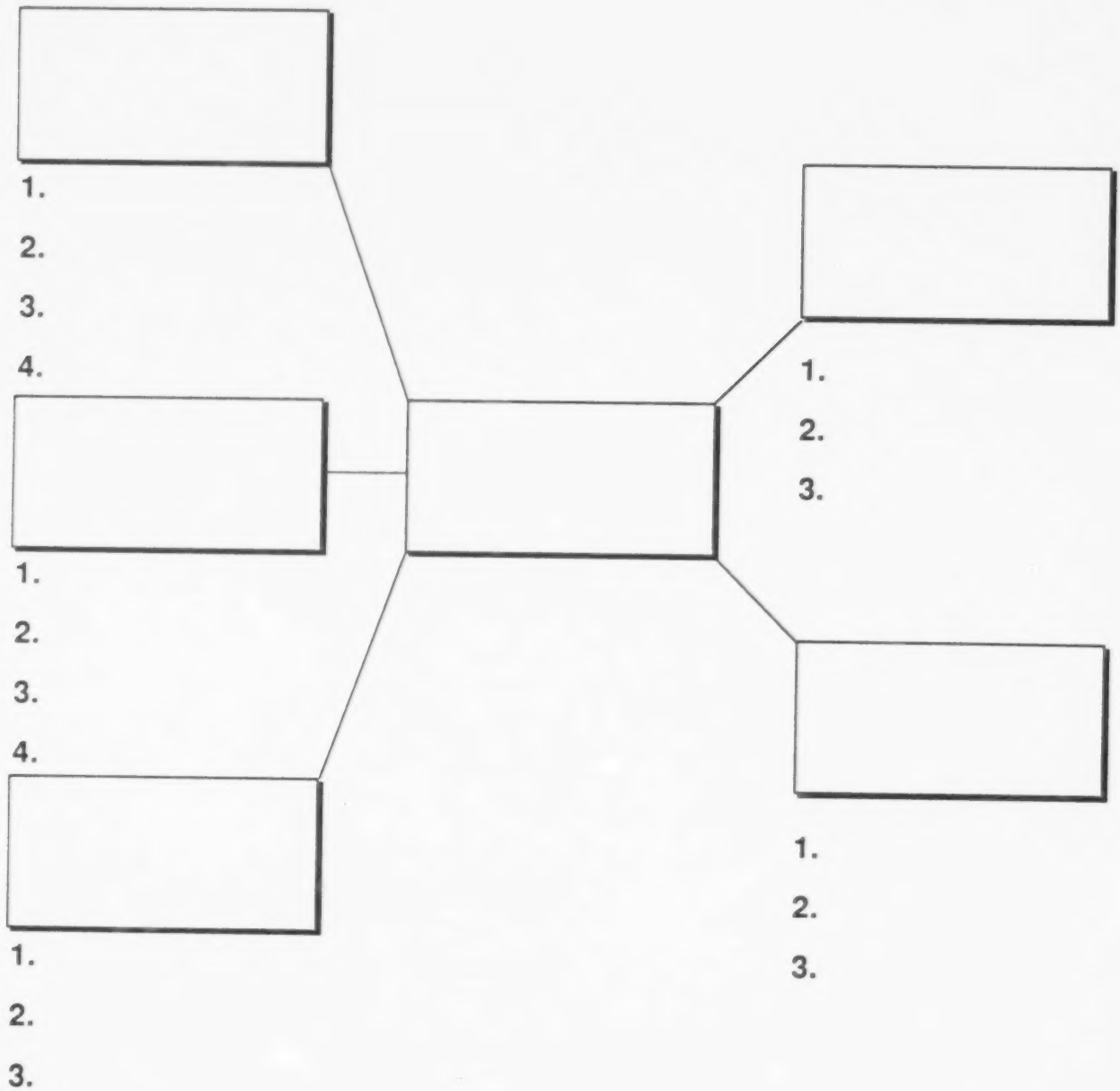
(C) Mapping Structures



(D) Mapping Structures



(E) Mapping Structures



Mapping IV
Note-Making Practice Sheet